

AN INVESTIGATION OF THE KANSAS FREE DENTAL
INSPECTION LAW TO DETERMINE THE
STATUS OF ITS OBSERVANCE.

by

John Allen Fleming, B. S. ^{'18}₄ of Ed.

(State Teachers College of Pittsburg.)

Submitted to the Department of
Education and the Faculty of
the Graduate School of the
University of Kansas in partial
fulfillment of the requirements
for the degree of Master of
Science in Education.

Approved by:

Instructor in charge

Raymond A. Schwegler
Dean of Education

May 29, 1924

OUTLINE FOR THESIS.

- I INTRODUCTION.
 - (a) The Significance of Dental Care and Health.
 - (b) The Status of Dental Care.
 - (c) The Actions of the Kansas State Legislators.
 - (d) The Present Status of the Law.
- II THE PROBLEM STATED.
- III PROCEDURE.
- IV THE DATA
- V INTERPRETATION.
- VI CONCLUSIONS.
- VII SUMMARY AND SUGGESTIONS.
- VIII SUPPLEMENTARY.
 - BIBLIOGRAPHY.
 - APPENDIX
 - (a) The Status of Dental Inspection in Each City.
 - (b) Report of the Kansas State Board of Health.
 - (c) Recommendations to Dental Inspectors.
 - (d) Recommendations to School Superintendents.
 - (e) Instructions to School Teachers.
 - (f) Cards Used for Dental Inspection.
 - (g) Extracts from Personal Letters.
 - (h) Extracts from Montgomery County Dental Inspection.
 - (i) Summary of Minneapolis Dental Inspection.

INTRODUCTORY STATEMENT AND VALIDATION OF PROBLEM.

The Significance of Dental Care and Health.

In every progressive country to-day the hygiene aspects of school life are coming to be regarded as of paramount importance. One of the more important phases of hygiene of school life is dental hygiene.

The following facts are given here to indicate why dental hygiene is important:

There are 32,250,870 persons of school age in the United States according to the census bureau.(15)

The Government found very few perfect specimens of manhood during the war, and approximately one-third of those examined were so seriously physically unfit that they were rejected for service. (3)

The physical examination of 12,340 school children in Alabama shows that defective teeth is the most common physical handicap. (16)

The Kansas Free Dental Inspection returns for 1919-1920 show that 66% of school children have cavities in their permanent teeth, and 43% have cavities in their temporary teeth. (2)

During the year 1921 in Denver, alone, 9,228 children, all under the third grade, were examined. Of this number, 72% of the mouths were found defective.(36)

A committee on the physical welfare of school children in New York City examined the school children and found that 40% needed dental care. (1)

Hoag and Terman stated in their book, published in 1914, that at least 80% of the children in our schools have seriously defective teeth. (8)

The foregoing facts have probably convinced the reader of the great need for dental inspection providing it can be shown that any good results come from this inspection. Therefore the writer will attempt to show in the following items that there is a correlation between dental inspection and dental care also between dental care and mental efficiency.

During the year 1920, Philadelphia school physicians examined 182,736 pupils. Of these 118,456 pupils, or 64.8%, of those examined were found to be physically defective. Of these 45%, following recommendation, were corrected. They have ten free dental clinics working full time to take care of dental defects. (13)

Dr. Osler calculated that in one city, he was referring to New York, there was a yearly financial loss of \$1,666,666 due to lack of medical inspection and supervision of health in the schools. He also said that he considered it of greater importance to the nation that the question of sound teeth be intelligently considered than that the consumption of alcohol be restricted, as important as the latter problem is. (1)

Dr. W. A. Loope, chairman, Oral Hygiene Committee, of the Ohio State Dental Society, said, "If you will compare the attendance record, the record of grades, and the status of health of the pupils in cities like Bridgeport, Boston, Cleveland, or Cincinnati, where dental inspection is at its best, with cities that have no dental inspection or dental care, you will be convinced that dental care is a good investment. (11)

R. L. Sandwick in his study, "Correlation of Physical Health and Mental Efficiency," found that the child of good intellectual ability is also the child of good physical ability. 40% of the low mental group in this experiment were found to have defective teeth, while in the high intellectual group, only 17% had defective teeth. The author states, that this investigation points to the un-mistakable duty of the school to provide for every child early and frequent medical inspection with a systematic follow up in applying remedies. (4)

Leonard P. Ayres, in his study, "The Relation of Physical Defects to School Progress", found that 42% of the dull children have defective teeth while only 34% of the bright ones have defective teeth. He found that defective teeth cause a 7% loss in school progress and that it takes on the average one-half year longer to finish the eight grades of our common schools for those pupils that have defective teeth. (12)

As a final proof of the value of dental care the writer offers the following:

Dr. W. G. Ebersole, "Report of Scientific Experiment," Conducted in the Cleveland Public Schools for the Purpose of Ascertaining the Value of Healthy Conditions of the Mouth, found in a series of investigations that 97% of the public school children in this country have diseased or faulty mouths. (10)

In a carefully planned and conducted experiment in the Cleveland Public Schools, mentioned above, starting with 40 pupils and finishing with 27 pupils, Dr. Ebersole found an average increase in working efficiency for the 27 pupils finishing the experiment of 99.8 plus %.

This means that if these 27 pupils are typical of our American School children, correct dental care would double our working efficiency.

Dr. Ebersole said, "Let me say most emphatically, that there had been absolutely no medical or surgical treatment of any kind given to these children which would in any way influence the physical results, except dental care, treatment and instruction".

Therefore this 99.8% plus increase in working efficiency seems to have no other causative factors than natural maturing and dental care.

The child with seriously defective teeth, in addition to wasting a large share of his time, is a menace to the other children. He is generally hard to manage and his mouth is a breeding place for disease germs.

The Status of Dental Care.

School Dentistry had its beginning in Strassburg, Germany in 1902. By 1907 thirty-three cities and towns in Germany had instituted school dental clinics and by 1909 the number was about fifty. They are now quite general in the larger cities of Germany, and travelling clinics for Rural schools are coming to be popular. (1)

In England, one of the first school clinics established was at Cambridge. By 1910 72% of the children of Cambridge had sound teeth, or artificially sound, teeth; before the work began only 33% had sound teeth. (1)

That Switzerland led the world in its concern for the physical welfare of its school children was conceded in 1908. At that time the English parliament was considering a bill to establish a national system of medical inspection of schools. (1)

At the International Congress on School Hygiene at London in 1907, the major governments of the world were represented. The fact was brought out at the congress that European countries were doing more than the United States in the medical inspection, including dental inspection, of schools and that they were making plans for the improvement in every direction of the hygiene conditions of school life. (1)

In the United States the work began in the large cities, Cleveland, Detroit, Cincinnati, Philadelphia, and New York.

Cleveland, 1924, has eight dental clinics and cares for about 18% of its children or 17,000. Detroit, 1924, has fifteen dental clinics; prophylaxis is given to any children, treatment to poor children only. Cincinnati found 1,754 children with defective teeth during medical inspection; 57% were corrected. In Philadelphia medical examination includes dental inspection. The free dental clinic there in the schools has followed, logically, free education. The city had ten free dental clinics in 1921. New York in a physical examination of 7,608 school children found that 40% had defective teeth. (13)

The country as a unit seems to be gaining interest in dental inspection. Arthur Capper introduced a bill before the last Congress providing for medical inspection, including dental inspection, of all school children in the United States. (9)

The states are also taking up the work. C. P. Knight speaking on the subject, "Health Supervision of School Children on a State Wide Basis", before the department of Child Hygiene of the N. E. A. said, "School Hygiene in Missouri was an unknown quantity prior to 1919 except in the two large cities. The Legislature created a division of child hygiene in this year. The year ending June 1920 17,561 pupils were examined and 34,823 defects were found.

The year ending June 1921 100,000 were examined; about 30% of defects are being corrected. The first 15,214 tabulated showed 9,572 people with defective teeth".

Every state, so far as the writer has been able to find out, is doing something with dental inspection. Most of the states are in the elementary stages of the work. Alabama, Colorado, and Kansas were previously mentioned.

(17-35)

THE ACTIONS OF THE KANSAS STATE LEGISLATURE.

The Kansas Legislators took its first official action on dental inspection in 1915 when it passed a law permitting dental inspection in cities of 40,000 or more population. (6)

THE LAW of 1915

Sec. 139. "Free Dental Inspection. All cities now having, or which may hereafter attain, a population of forty thousand people may provide free dental inspection for all children attending public schools there in."

Sec. 140. "Employment of Dentists; Regulations. The board of education or body controlling the public schools in said cities may establish such place or places of inspection as may be necessary; designate such competent and licensed dentist or dentists who shall make such inspections and fix and provide compensation for his or their services therefor, and for any and all dental work required or by them deemed necessary to be done under and by virtue of such inspection and make any and all rules by said board deemed necessary and proper to regulate such inspection and carry the same into effect; and may prescribe and cause to be prepared all forms and blanks necessary in the details of said inspection."

Sec. 141. "Certificate of Inspection. A certificate of the results of such inspection over the signature of the party making such inspection shall be furnished to each child without cost at the time of such inspection, and a duplicate thereof filed with the clerk of said board of education; provided however, that before any dental work shall be done said certificate of inspection so delivered to each child shall be returned with the consent of the parent or guardian of said child indorsed thereon."

The law of 1915 was replaced in 1919 with the present law. (7)

THE LAW of 1919

Free Dental Inspection in the Public Schools.

"An Act to create and maintain free dental inspection in schools in the State of Kansas, amending Sections 9099, 9100, and 9101 of the General Statutes of 1915 and repealing said original sections."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF KANSAS.

Section 1. "That section 9099 of the General Statutes of 1915 be amended to read as follows: Section 9099. That boards of education of cities of the first and second class and school boards of school districts are hereby required to provide for free dental inspection annually for all children, except those who hold a certificate from a legally qualified dentist showing that this examination has been made within three months last past, attending such schools."

Section 2. "That section 9100 of the General Statutes of 1915 be amended to read as follows: Section 9100. That said boards of education and district boards of each school shall provide a place of inspection and designate some competent, licensed dentist or dentists to make such inspection, and such boards of education and district boards may fix compensation for such services rendered therein, and said boards of education for their respective cities and the county superintendent of public instructions for school districts are hereby authorized to make all necessary rules and regulations for the proper conduct of such inspection and carrying into effect all of Section 1 of this act, and furnish all necessary forms and blanks for the reports of such inspection."

Section 3. "That section 9101 of the General Statutes of 1915 be amended to read as follows: Section 9101. That certificate of the result of such inspection, together with suggestions of requirements for the curing of any defect found shall be made by the party making such inspection, in duplicate, the other to be filed with the clerk of the school board to which said child belongs; Provided, however, that no work other than the inspection and report shall be performed by examining dentist without the consent of the parents or guardian of the child."

The present dental inspection law has been in operation for four years; yet no scientific investigation has been made of the status of its observance.

As far as the writer has been able to find out, Kansas is the only state having a law that requires free dental inspection for every child in its schools.

The Present Status of the Law.

The law at present is not permissive, but mandatory.

"Boards of Education in cities of the first and second class, and school boards in school districts are required to provide Free Dental Inspection, Annually." (7)

Any citizen in a community where dental inspection is not held could bring proceedings and compel the proper officials to do this work or resign.

There is no penalty for failure to observe the law.

The enforcement of the law is left to the local community, instead of being under a state department with power to enforce it.

THE PROBLEM STATED.

Stated briefly the problem is to find out just what is being done, or to determine the status of the Kansas Free Dental Inspection Law in the several cities of Kansas and to make a comparison of this observance by classes of cities.

It is proposed to show the following:

1. Whether the Kansas Free Dental Inspection Law is being observed.
2. Where this inspection is held in cities that do observe it.
3. Whether cities have a full time or part time school dentist.
4. Whether cities use all their resident dentists.
5. Whether the work is done free or paid for, how much is paid, and method of payment.
6. Where cities do not have this inspection, annually, how often they do have it.
7. What time of year inspection is held.
8. What percent of pupils are now exempt.
9. What use is made of the records the school keeps.
10. Whether there is any free dental clinic work being done, other than the inspection.
11. Whether any follow-up work is being done.

PROCEDURE

In making this study the survey method was used. In gathering the material the questionnaire was used.

Questionnaires were sent to all first class cities, all second class cities, and 489 third class cities. No second requests were made, as 56.8% of the cities receiving questionnaires answered, and 50% of all the cases are usually accepted as a fair random sample. The data were secured from the city superintendents and should be as reliable as any obtainable. The data have been carefully checked and re-checked by the writer and where apparent errors existed the datum has been discarded or verified by personal letters. The compilation of the data has been carefully done by the writer, personally;

A summary of questionnaires sent out, answers received, and cities observing the law is shown in the following table.

Table 0

QUESTIONNAIRES SENT OUT, ANSWERS RECEIVED, CITIES OBSERVING LAW.

	First	Second	Third	All cities
Questionnaires sent out.	11	76	489	576
Answers received.	10	62	255	327
% of answers rec'd	90.9%	81.6%	52.1%	56.8%
Number of cities observing the law.	9	44	149	202
% that answered observing law.	90%	71%	58.4%	61.8%

Table 0 shows that 11 questionnaires were sent out to first class cities, 10 answers were received, and nine of these observe the law. 90.9% of the cities answered and 90% of those answering observe the law. 76 questionnaires were sent out to second class cities, 62 answers were received, and 44 of these observe the law. 81.6% of the second class cities answered, and 71% of those answering observe the law. 489 questionnaires were sent out to third class cities, 255 answers were received and 149 of these observe the law. 52.1% of the third class cities answered, and 58.4% of those answering observe the law. A total of 576 questionnaires were sent out, 327 answers were received, and 202 of these observe the law. 56.8% of the cities answered, and 61.8% of those observe the law.

The questionnaires were mailed in October and the answers continued to come in until February.

The tables in the next section were made from the material taken from the answers to the questionnaire. The tables are numbered to correspond to the questions in the questionnaire. There is no table 6 as no school had a full time school dentist.

The following questionnaire was used in gathering the material for this study.

Oct. 27, 1922.

To the City Superintendents of Kansas,
Gentlemen:

I am making a study of the "Kansas Free Dental Inspection Law", and would like to have the following information. This questionnaire is being sent to all the city superintendents in Kansas, (712 in all). Your co-operation will be appreciated. Please check with an X in the column marked "yes" or the one marked "no". Thank you. J.A.Fleming.

Yes No

1. Do you have "Free Dental Inspection," annually,
as provided for in the Kansas School Laws?
2. Is this inspection held in the school building?
3. Is this inspection held in the Dentist's office?
4. Do your Dentists do this work free?
5. Do you use all your resident Dentists?
6. Do you have a full time school Dentist?
7. Do you have a part time school Dentist?
8. If you pay your Dentist by the month, how much?
9. If you pay your Dentist by the year, how much?
10. If you pay him by the hour, how much?
11. If you pay him by the day, how much?
12. If you pay him so much per pupil, state amount.
13. During what month of the year is the inspection held?
14. If you do not have this inspection annually, how often
do you have it?
15. What % of the pupils do you find exempt by having
been inspected within the last three months?
16. What use is made of the records you keep?
17. Does your school provide for any free dental clinic work?
If so, what is the nature and extent of the work done?
Please send copy of report if such is available.
18. Do you do any follow-up work? If so, what is the nature
and extent of the work done? Please send copy of report
if such is available.

THE DATA

Table 1.

CITIES THAT HAVE FREE DENTAL INSPECTION AS PROVIDED BY LAW.

	First	Second	Third	All cities
Number of cities.	9	44	149	202
% of cities	90%	71%	58.4%	61.8%
% of cities answering questionnaire.	90.9%	81.6%	52.1%	56.8%

WHAT TABLE NUMBER 1. SHOWS.

There are eleven first class cities in Kansas. Ten of them answered the questionnaire. Nine of them do have free dental inspection as provided by law. This is 90% of those answering.

There are 76 second class cities in Kansas, according to the latest Kansas Educational Directory, 62 of them answered. Of these, 44 observe the law. This is 71%.

Questionnaires were sent to 489 third class cities in Kansas. 255 of them answered and of those, 149 observe the law. This is 58.4% of those answering.

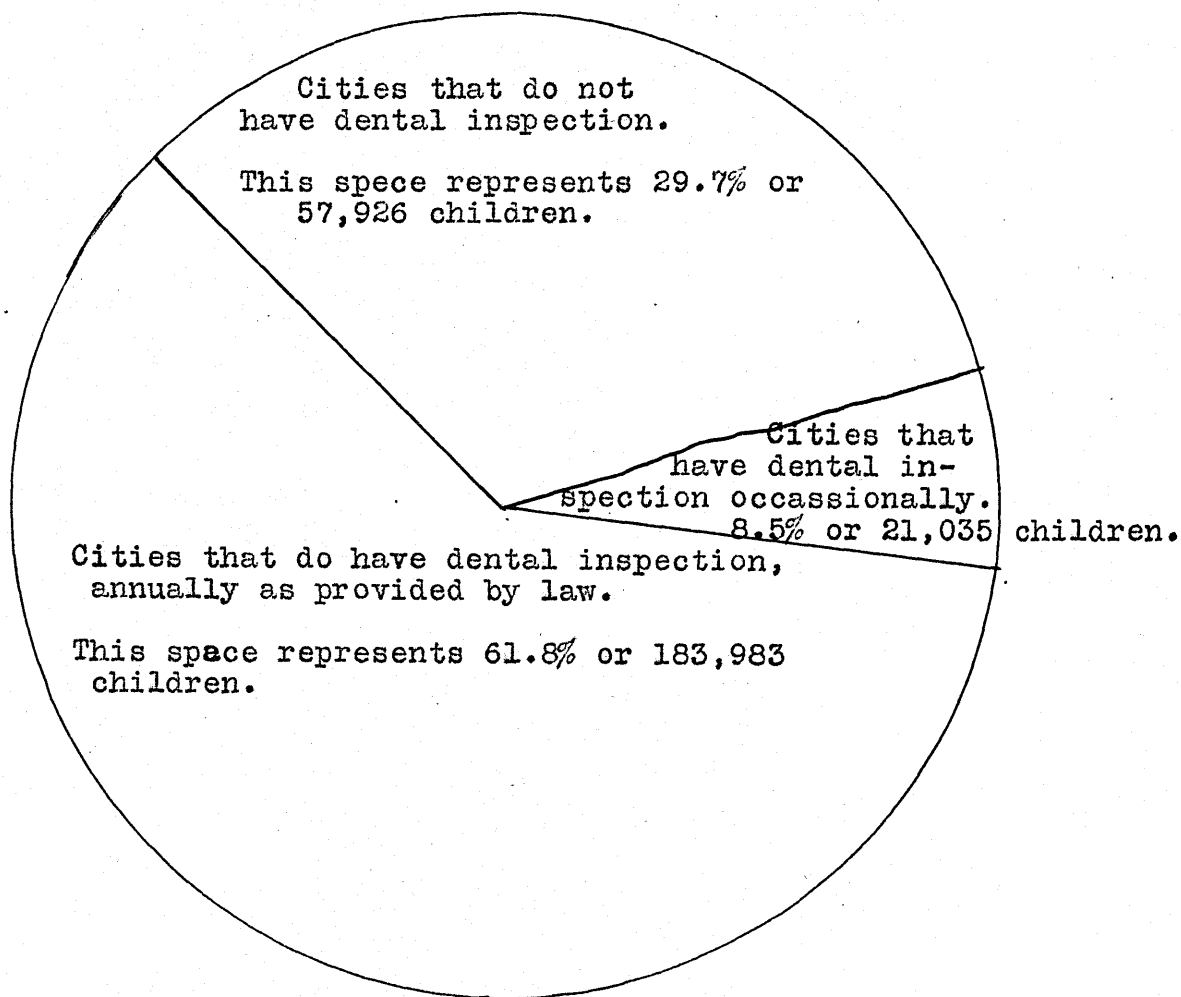
A total of 576 questionnaires were sent out and 327 answers were received, of which 202 do have free dental inspection, annually, as provided by law. This is 61.8% of those answering.

90.9% of the first, 81.6% of the second, and 52.1% of the third class cities answered the questionnaire. This is 56.8% for all cities.

Referring to the summary of table 1, two conclusions

IS THE KANSAS FREE DENTAL INSPECTION LAW BEING OBSERVED.

Proposition 1



may be drawn;

First, As cities decrease in size the tendency to evade or neglect the law increases.

Second, The percentage of answers received from the questionnaire indicate that school people are interested in this problem.

Table 2.

CITIES THAT HOLD THIS INSPECTION IN THE SCHOOL BUILDING.

	First	Second	Third	All cities
Number of cities.	9	33	127	181
% of cities ans.	90%	52.4%	49.8%	55.2%
% of those that observe the law.	100%	75%	85.2%	83.7%

WHAT TABLE NUMBER 2 SHOWS.

Nine first class cities hold their dental inspection in the school building. This is 100% of those that observe the law and 90% of those answering.

33 second class cities hold their dental inspection in the school building. This is 75% of those that observe the law and 52.4% of those answering.

127, of the third class cities answering, hold their dental inspection in the school building. This is 83.7% of the cities that observe the law.

169 of the 202 cities that observe the law hold their dental inspection in the school building. This is 83.7% of the cities that observe the law.

Table 3

CITIES THAT HAVE DENTAL INSPECTION IN THE DENTIST'S OFFICE

	First	Second	Third	All cities
Number of cities.	0	10	20	30
% of cities.	0	22.7%	13.4%	14.9%

WHAT TABLE NUMBER 3 SHOWS.

No first class city holds its dental inspection in the dentist's office.

Ten second class cities hold their dental inspection in the dentist's office. This is 22.7% of the second class cities that observe the law.

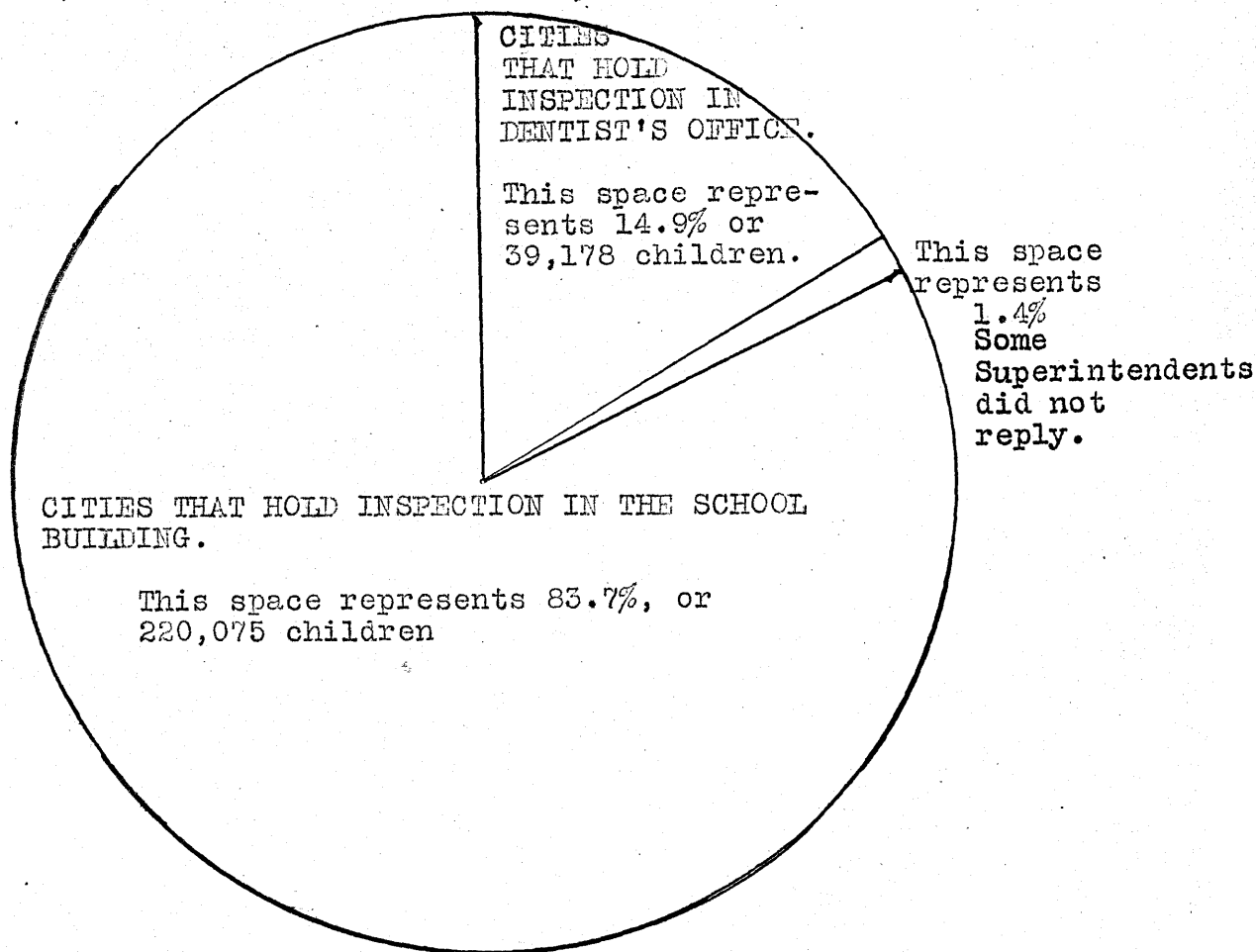
Twenty third class cities hold their dental inspection in the dentist's office. This is 13.4% of those that observe the law.

Of the 202 cities that observe the law, 30 cities hold their dental inspection in the dentist's office. This is 14.9% of the cities that observe the law.

Where 30 cities hold their dental inspection in the dentist's office 181 hold it in the school building. This is one to six.

WHERE THIS INSPECTION IS HELD IN CITIES THAT DO
OBSERVE THE LAW.

Proposition 2



The above figure is self explanatory with the exception of the percent. The reader may wonder why the cities that hold inspection in dentist's office and those that hold inspection in the school building do not make 100%. The answer is some superintendents did not answer this question.

Table 4

CITIES WHERE THE DENTISTS DO THE WORK FREE.

	First	Second	Third	All cities
Number of cities.	2	10	27	39
% of cities.	22.2%	22.7%	18.1%	19.3%

WHAT TABLE NUMBER 4 SHOWS.

Two of the nine first class cities that observe the law get this work done free. This is 22.2% of the cities that observe the law.

Of the 44 second class cities that observe the law, the dentists do the work free in ten. This is 22.7% of the cities that observe the law.

Of the 149 third class cities that observe the law, 27 get this work done free. This is 18.1% of the third class cities that observe the law.

The dentists do the work free in 39 of the 202 cities that observe the law. This is 19.3% of those cities that observe the law.

Where one city gets this work done free, four cities are paying for it.

Size of city does not affect the matter of getting the dental inspection done free.

Table 5.

CITIES THAT USE ALL THEIR RESIDENT DENTISTS.

	First	Second	Third	All cities
Number of cities.	4	25	51	80
% of cities.	44.4%	56.8%	34.2%	39.6%

WHAT TABLE NUMBER 5 SHOWS.

Four of the nine first class cities use all their dentists. This is 44.4% of the cities that observe the law.

Of the 44 second class cities that observe the law 25 use all their dentists. This is 56.8% of the second class cities that observe the law.

Of the 149 third class cities that observe the law, 51 use all their resident dentists. This is 34.2% of such cities.

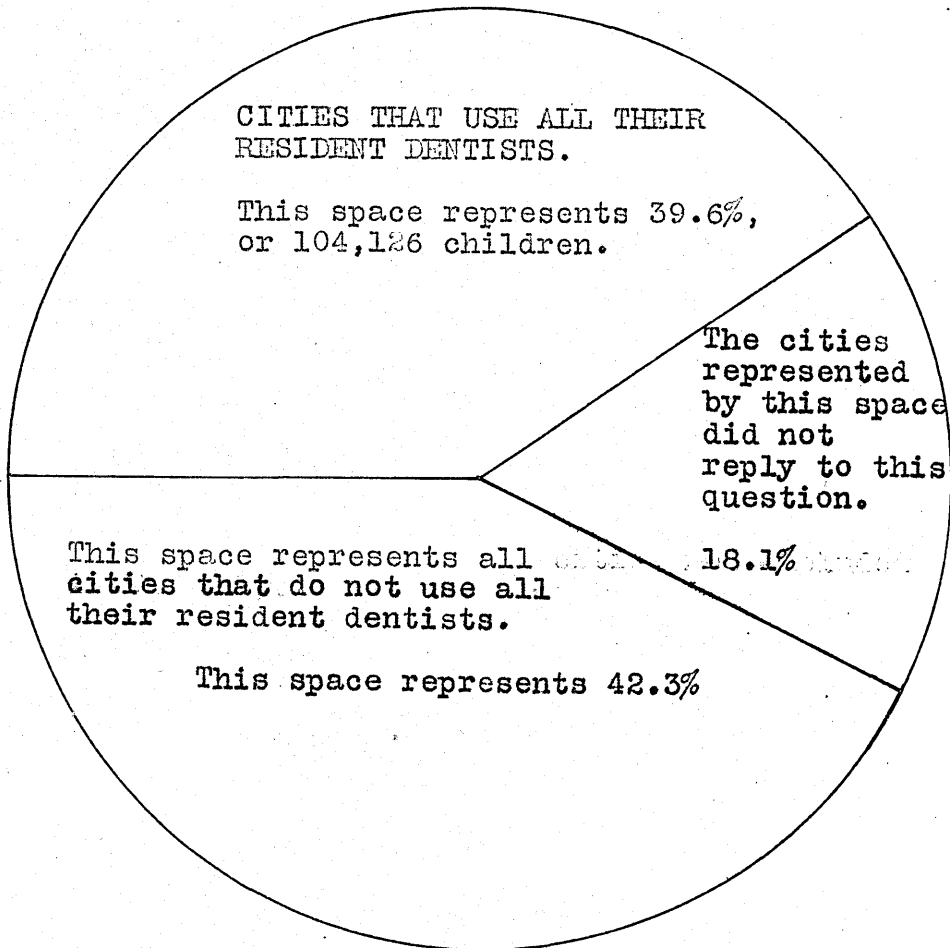
Of the 202 cities in Kansas that observe the law, 80 use all their dentists. This is 39.6% of the cities that observe the law.

Approximately, out of each five cities that observe the law, two use all their dentists.

A larger percentage of second class cities use all their dentists than first or third class cities. This is probably due to the fact that large cities have too many dentists to use all of them profitably, and small cities often have only one or none and in that case must get one from another city.

WHETHER CITIES USE ALL THEIR RESIDENT DENTISTS.

Proposition 4



No city has a full time school dentist, therefore no table will be made for question 6.

Table 7.

CITIES THAT HAVE A PART TIME SCHOOL DENTIST.

	First	Second	Third	All cities.
Number of cities.	3	2	1	6
% of cities	33.3%	4.5%	.67%	2.97%

WHAT TABLE NUMBER 7 SHOWS.

Of the nine first class cities having dental inspection, three have a part time school dentist or more. Wichita has two. This is 33.3% of those that have dental inspection, in other words, one in three.

Of the 44 second class cities that have dental inspection, annually, two have a part time school dentist. this is 4.5% of those that observe the law.

Of the 149 third class cities that have dental inspection, one has a part time school dentist. This is .67% of those that observe the law.

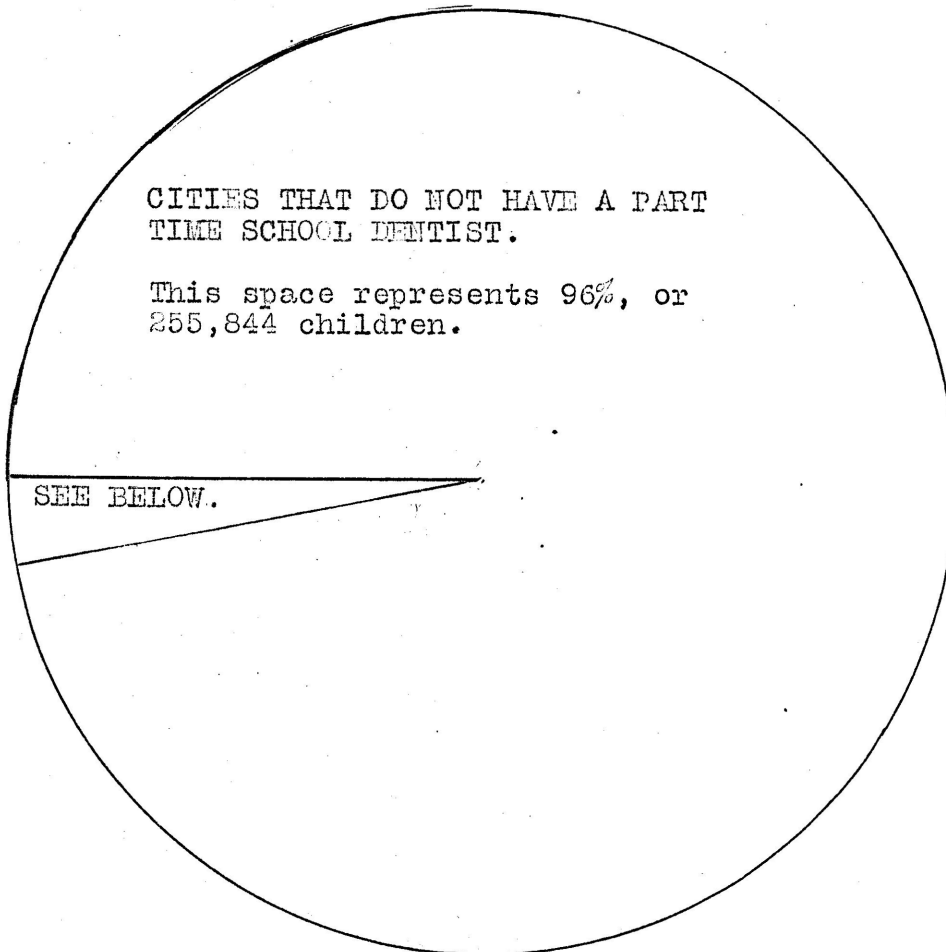
Six of the 202 cities that observe the law, have a part time school dentist. This is 2.9% of those that observe the law.

As the cities decrease in size their chance to have a part time school dentist decreases.

A city in Kansas has one chance in 33 to have a part time school dentist.

WHETHER CITIES HAVE A FULL TIME OR PART TIME
SCHOOL DENTIST.

Proposition 3



This small space represents 2.97%, or 7100 children.

These children live in cities that do have a part
time school dentist.

Table 8.

CITIES THAT PAY THEIR DENTISTS BY THE MONTH.

	First	Second	Third	All cities.
Number of cities.	1	1	1	3
% of cities.	11.1%	2.3%	.67%	1.5%

WHAT TABLE NUMBER 8 SHOWS.

Table 8 shows that one first, one second, and one third class city pays its dentist by the month. This is respectively, 11.1%, 2.3%, and .67% of the cities that observe the law. Of the 202 cities that observe the law three of them pay their dentist by the month. This is 1.5% of the cities that observe the law.

Table 9.

CITIES THAT PAY THEIR DENTISTS BY THE YEAR.

	First	Second	Third	All cities
Number of cities.	0	2	3	5
% of cities	0	4.5%	2%	2.4%

WHAT TABLE NUMBER 9 SHOWS.

Table 9 shows that no first class city, two second class cities, and three third class cities pay their dentists by the year. This is 4.5% for second class cities and 2% for third class cities. Of the 202 cities that observe the law, five pay their dentists by the year. This is 2.4%

of those that observe the law.

What these cities really do is pay their dentist by the job.

Table 10.

CITIES THAT PAY THEIR DENTISTS BY THE HOUR.

	First	Second	Third	All cities.
Number of cities.	0	0	3	3
% of cities.	0	0	2%	1.5%

WHAT TABLE NUMBER 10 SHOWS.

Table number 10 shows that no first class city, no second class city, and only three third class cities pay their dentists by the hour. One city specified that it pays \$1.00 per hour.

Of the 149 third class cities that observe the law, three, or 2%, pay their dentists by the hour. This is 1.5% of the 202 cities that observe the law.

It is not a common way to pay dentists by the year, month or hour.

Table 11.

CITIES THAT PAY THEIR DENTISTS BY THE DAY.

	First	Second	Third	All cities
Number of cities	6	19	47	72
% of cities.	66.6%	43.2%	31.5%	35.6%

DISTRIBUTION

Amount paid. \$	First	Second	Third	All cities.
4.			1	1
5.			1	1
8.	1			1
10.	5	17	28	50
12.			1	1
12½			1	1
15		2	3	5
18			1	1
20			3	3
25			2	2

WHAT TABLE 11 SHOWS.

Six of the first class cities, 19 of the second class cities, and 47 of the third class cities, making a total of 72 cities, ~~there~~ pay their dentists by the day. This is 66.6% for the first class cities, 43.2% for the second class cities, 31.5% for the third class cities, and 35.6% for all cities.

Five of the six first class cities, 17 of the 19 second class cities, 28 of the 42 third class cities, making a total of 50 of the 66 cities that pay by the day, pay \$10 per day.

The mode, the median, and quartiles fall within this measure, therefore, it is probably safe to conclude that \$10 is the common price to pay a dentist per day.

More cities pay their dentist by the day than any other way. The tendency among smaller cities to pay by the day is not so marked. Smaller cities tend to pay more per day than larger cities, due to the fact, according to statements made on the questionnaires, that a great many small cities have no resident dentist and must get one from another city. This makes the expense, for traveling, very high and it is sometimes added to the salary.

Table 12.

CITIES THAT PAY THEIR DENTISTS SO MUCH PER PUPIL.

	First	Second	Third	All cities.
Number of cities.	0	4	16	20
% of cities.	0	9.1%	10.7%	9.5%

DISTRIBUTION

Amount paid.	First	Second	Third	All cities.
5¢	0	0	1	1
10	0	2		2
12½	0	1		1
15	0		1	1
20	0		1	1
25	0		5	5
50	0	1	6	7

WHAT TABLE NUMBER 12 SHOWS.

No first class city, four second class cities, and 16 third class cities, making a total of 20 cities pay their dentists so much per pupil. This is 9.1% for the second

WHETHER THE WORK IS DONE FREE OR PAID FOR, HOW
MUCH IS PAID, AND METHOD OF PAYMENT.

Proposition 5

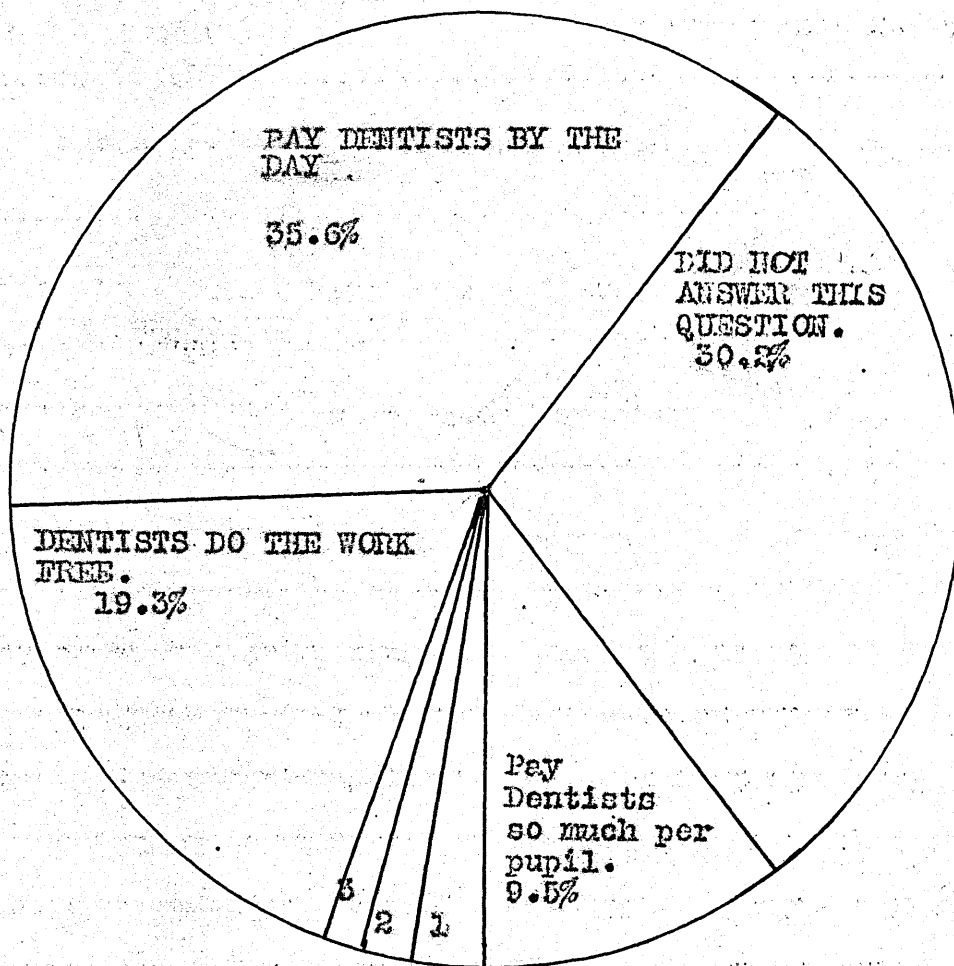


Figure (1) represents the schools that pay their dentists by the year. It is 2.4%.

Figure (2) represents the schools that pay their dentists by the month. It is 1.5%.

Figure (3) represents the schools that pay their dentists by the hour. It is 1.5%.

class cities, 10.7% for the third class cities, and 9.9% for all cities.

The range for the amount paid per pupil is from 5¢ to 50¢, with the median falling on the interval of 25¢ and the mode falling on 50¢.

The number of cities in the distribution is not enough on which to base a definite conclusion as to what should be paid per pupil.

Table 13.

THE TIME OF THE YEAR CITIES HOLD THEIR DENTAL INSPECTION.

	First	Second	Third	All cities
Sept. Oct. Nov. No.	5	27	72	104
Fall %	55.5%	31.4%	48%	51.5%
Dec. Jan. Feb. No.	1	3	26	30
Winter %	11.1%	6.8%	17.4%	14.9%
March. Apr. May No.	1	1	8	10
Spring %	11.1%	2.3%	5.4%	4.95%
No.	3	1	1	5
All the year. %	33.3%	2.3%	0.67%	2.5%
Number that have school nurses %	1	6	0	7
	11.1%	13.6%	0	3.5%

WHAT TABLE NUMBER 13 SHOWS.

Five first class cities, 27 second class cities, 72 third class cities, making a total of 104 cities, hold their dental inspection during the fall months, September, October, and November. This is 55.5% for first class cities, 31.4% for second class cities, 48% for third class cities, and 51.5% for all cities.

One first class city, three second class cities, and 26 third class cities hold their dental inspection during the winter months, December, January, and February. This is

respectively 11.1%, 6.8%, and 17.4%. Of the 202 cities observing the law 30, or 14.9%, hold their inspection during the winter months.

One first class city, one second class city, and eight third class cities, making a total of ten in all, hold their dental inspection during the spring months, March, April, and May. This is 11.1% for the first class cities, 2.3% for second class cities, and 5.4% for third class cities, making a total of 4.95% for all cities.

Three first class cities, one second class city, and one third class city, making a total of five cities, hold their dental inspection all the year. This is respectively 33.3%, 2.3%, and .67%.

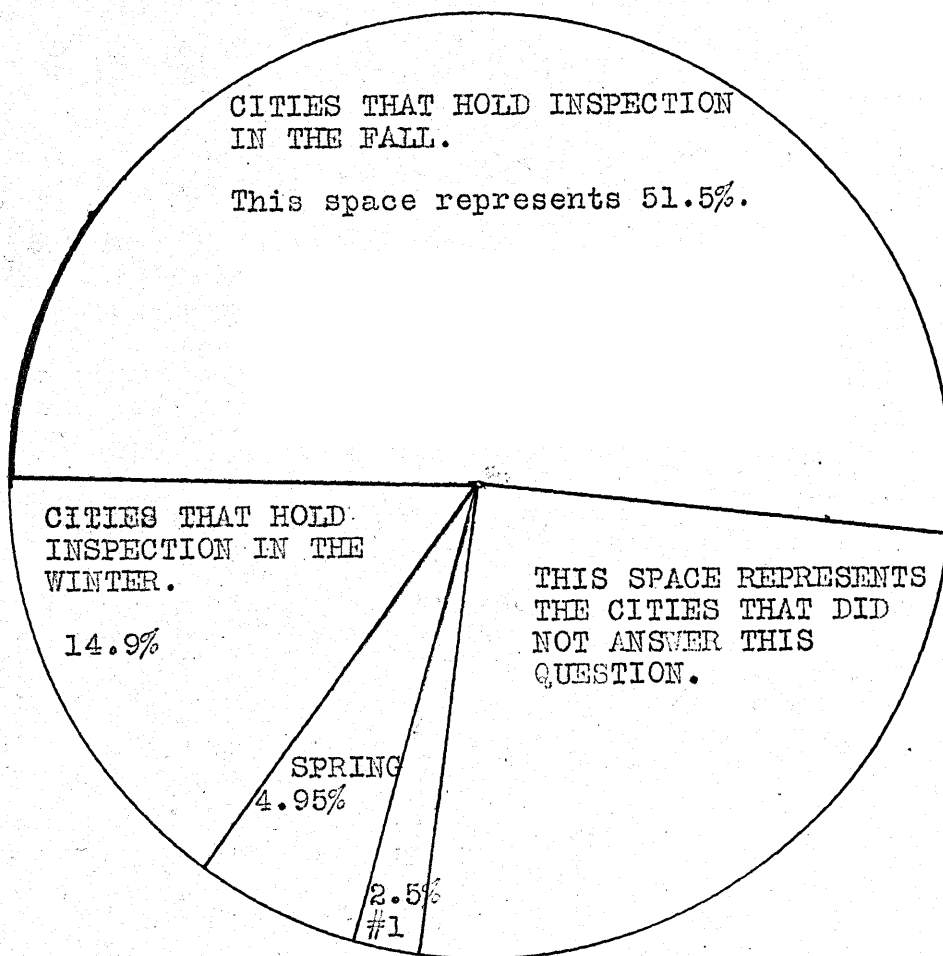
One first class city, and six second class cities, making a total of seven cities, have school nurses to look after dental inspection. This is 11.1% for first, 13.6% for second, and 3.5% for all cities.

The fall is the most common time for having dental inspection. The school has a better chance to do follow-up work when the inspection is held in the fall.

Schools, that really have a part time school dentist, have this inspection all the school year.

WHAT TIME OF YEAR INSPECTION IS HELD.

Proposition 7



This figure is self explanatory.

#1-Cities that hold inspection all year.

Table 14

CITIES THAT HAVE DENTAL INSPECTION, BIENNIALY.

	First	Second	Third	All cities.
Number of cities.	0	2	6	8
% of cities.	0	4.5%	4.%	3.9%

WHAT TABLE NUMBER 14 SHOWS.

Two second class cities, or 4.5%, have dental inspection, biennially.

Six third class cities, or 4%, have dental inspection, biennially.

Eight cities of all classes, or 3.9%, have dental inspection, biennially.

Most cities that do not have dental inspection, annually, do not have any definite time for inspection but just have it when convenient.

Table 15

CITIES THAT EXEMPT PUPILS FOR HAVING BEEN INSPECTED WITHIN THE LAST THREE MONTHS AND PERCENTAGE EXEMPT.

	First	Second	Third	All cities.
Number of cities.	3	13	39	55
% of cities.	33.3%	29.3%	26.1%	27.2%

DISTRIBUTION

Percent Exempt.	First	Second	Third	All cities.
1-10%	0	11	22	33
11-20%	0	0	6	6
21-30%	1	1	2	4
31-40%	1	0	0	1
41-50%	0	0	1	1
51-60%	0	0	1	1
61-70%	0	0	0	0
71-80%	1	0	1	2
81-90%	0	1	1	2
91-100%	0	0	0	0

WHAT TABLE NUMBER 15 SHOWS.

Three first, 13 second, and 39 third class cities exempt according to the law. This is 33.3% for the first, 29.5% for second, and 26.1% for the third class cities. Of the 202 cities that observe the law, 55, or 27.2%, exempt according to law. Half of the cities, that exempt and state how many they exempt, exempt from one to five percent.

The smaller the city the less the tendency to exempt and the less the percentage of exemption.

A number of the superintendents, some of them in the larger cities, showed they were not familiar with the law as they answered this question thus; "We exempt none, all must be inspected".

The writer feels that, through encouraging the pupils to seek exemptions, we are helping them to form the habit of consulting the dentist; this in itself is a valuable asset.

WHAT PERCENT OF PUPILS ARE NOW EXEMPT.

Proposition 8

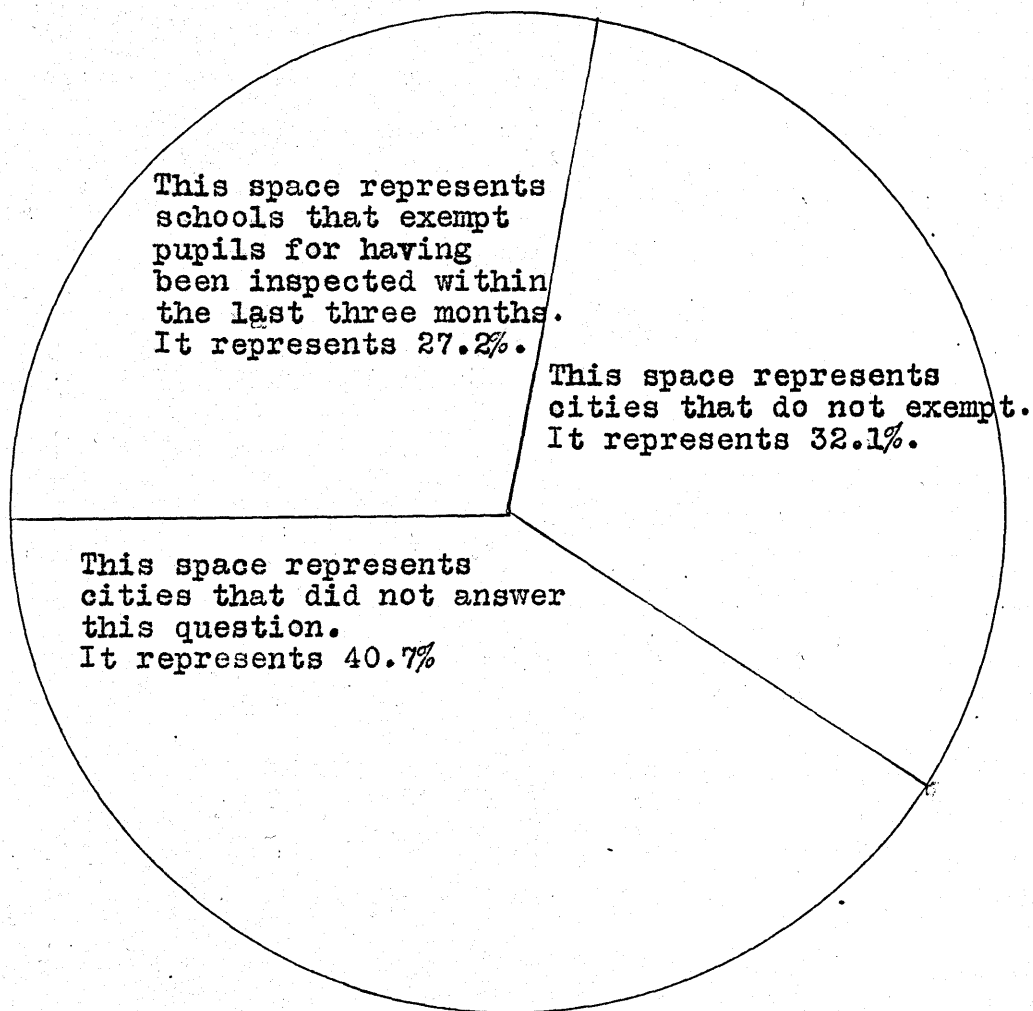


Table 16

WHAT SCHOOLS DO WITH THE RECORDS THEY KEEP.

	First	Second	Third	All cities.
Number answering this question.	4	18	39	61
% answering this question.	44.4%	40.9%	26.2%	25.2%

THE ANSWERS TO QUESTION 16 WERE AS FOLLOWS:

1. Dentists compare at inspection time.
2. Used to check up corrections. See if work is done.
3. Follow-up by nurse. Follow-up work.
4. Filed for reference.
5. Comparison.
6. Comparison with records of school work as to quality and attendance.
7. Check on work needed.
8. Check up.

NUMBER & % OF CITIES FOR EACH QUESTION BY CLASSES OF CITIES.

Questions	First	Second	Third	All cities.
1. Number	1	1	3	5
1. %	11.1%	2.3%	2%	2.5%
2. Number	1	3	8	12
2. %	11.1%	6.8%	5.4%	5.4%
3. Number	1	11	5	17
3. %	11.1%	25%	3.4%	8.4%
4. Number	1	3	12	16
4. %	11.1%	6.8%	8.1%	7.9%
5. Number	0	0	5	5
5. %	0	0	3.4%	2.5%
6. Number	0	0	3	3
6. %	0	0	2.3%	1.5%
7. Number	0	0	1	1
7. %	0	0	.67%	.49
8. Number	0	0	2	2
8. %	0	0	1.3%	.99%

WHAT TABLE NUMBER 16 SHOWS.

A total of four first class cities, or 44.4%, make use of the records they keep.

Eighteen of the 44 second class cities that observe the law make use of the records they keep. This is 40.9% of those that have dental inspection, annually.

Of the 149 third class cities that observe the law, 39 make use of the records they keep. This is 26.2% of those that observe the law.

Of the 202 cities that observe the law, 61, or 25.2%, make use of the records they keep.

As shown on the preceding page, there are eight uses mentioned for the records the school keeps. All of them except number (4) may be very useful. Answer number (4) states that the records are filed for reference. If they are not used after they are filed they are not very useful to the people filing them.

WHAT USE IS MADE OF THE RECORDS THE SCHOOL KEEPS.

Proposition 9

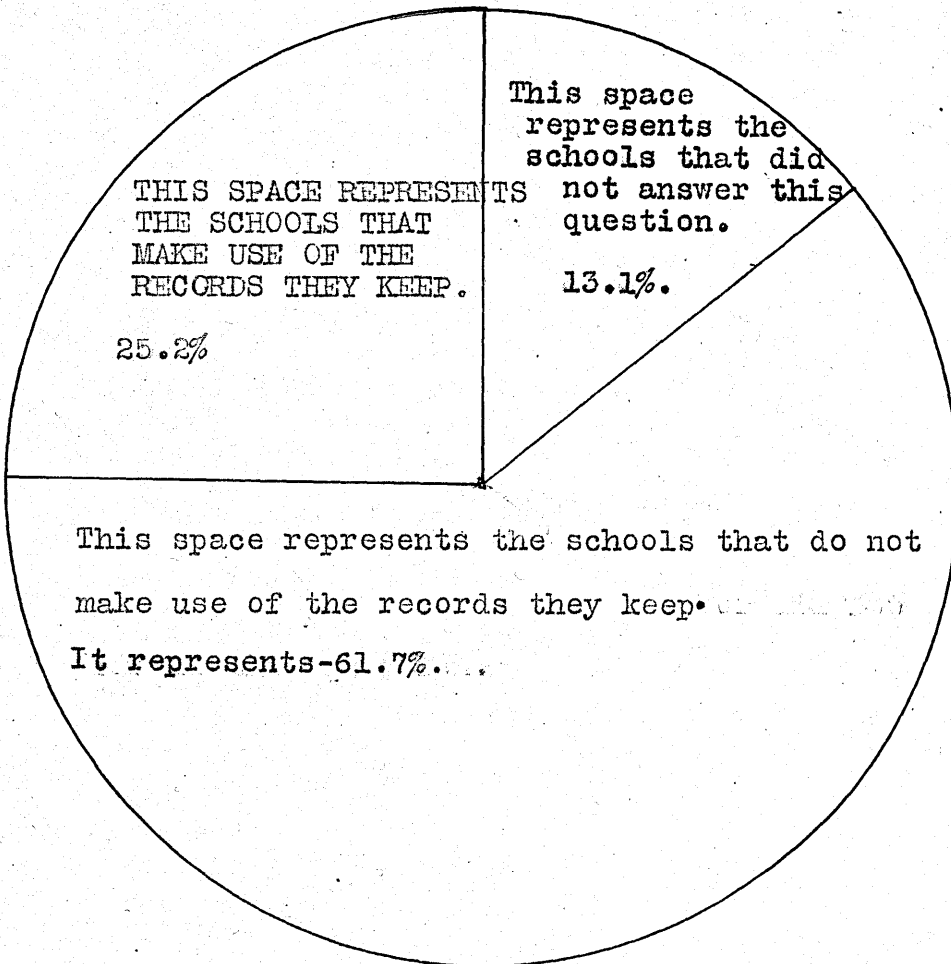


Table 17

CITIES THAT PROVIDE FOR FREE DENTAL CLINIC WORK.

	First	Second	Third	All cities
Number of cities.	2	8	3	13
% of cities.	22.2%	18.2%	2%	6.4%

WHAT TABLE NUMBER 17 SHOWS.

Two first class cities, eight second class cities, and three third class cities, making a total of thirteen cities in all, provide for some free dental clinic work.

WHAT TABLE 17 DOES NOT SHOW THAT SEEMS WORTH NOTICING.

One first class city and one second class city have free dental clinics.

One first class city, six second class cities, and two third class cities do work free for poor children.

One second class city does work free for the worst cases.

One third class city does filling, cleaning, etc. for all children.

WHETHER THERE IS ANY FREE DENTAL CLINIC WORK BEING
DONE, OTHER THAN THE INSPECTION.

Proposition 10

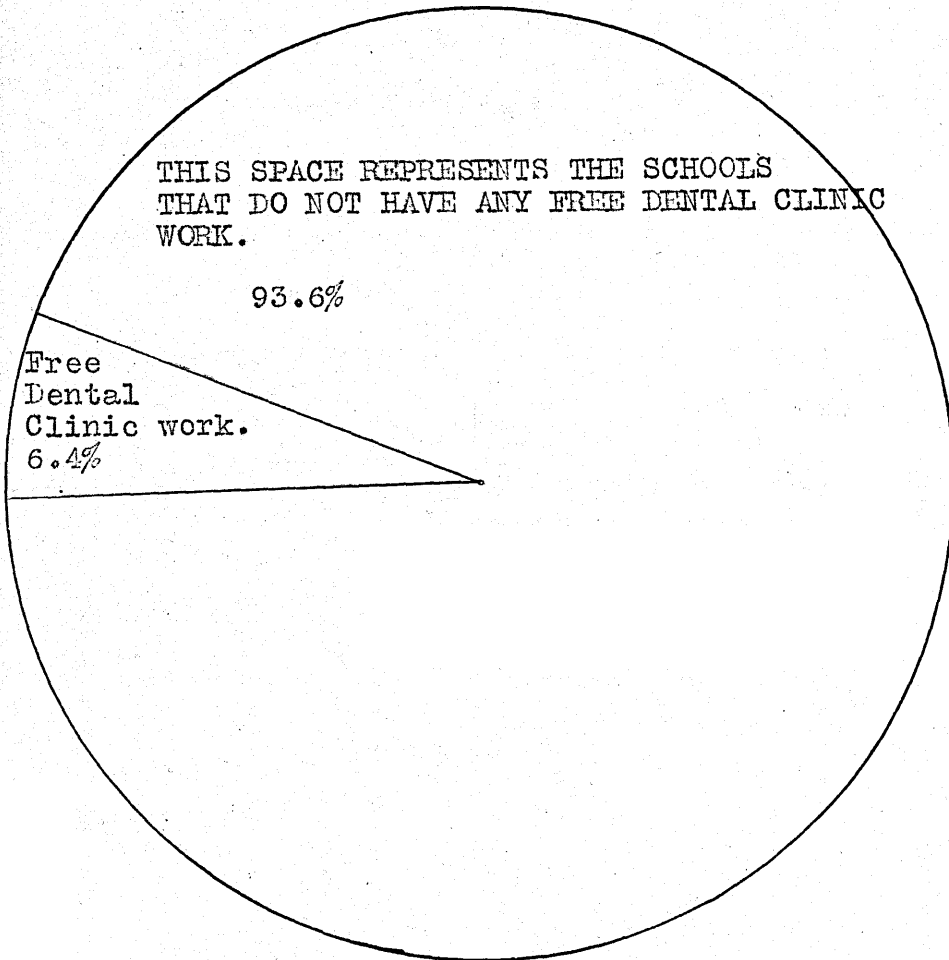


Table 18

CITIES THAT DO FOLLOW-UP WORK.

	First	Second	Third	All cities.
Number of cities.	5	18	8	31
% of cities.	55.5%	40.9%	5.4%	15.3%

WHAT TABLE NUMBER 18 SHOWS.

Five first class cities, or 55.5%, do follow-up work.

Eighteen second class cities, or 40.9%, do follow-up work.

Eight third class cities, or 5.4%, do follow-up work.

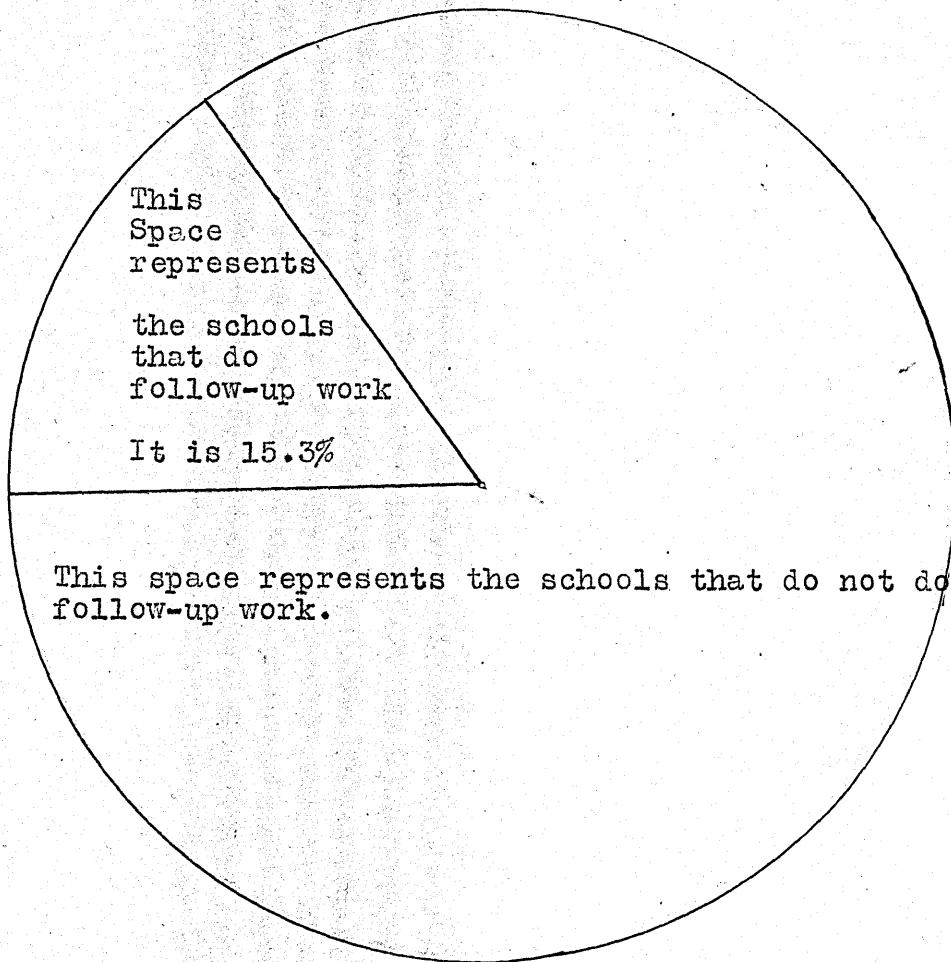
Of the 202 cities of all classes that have dental inspection, annually, 31, or 15.3%, do follow-up work.

The nature of this follow-up work was not revealed.

The lack of systematic follow-up work is one of the greatest weaknesses of dental inspection as we have it in Kansas today.

WHETHER ANY FOLLOW-UP WORK IS BEING DONE.

Proposition 11



This space represents the schools that do not do follow-up work.

The nature of this follow-up work was not revealed.

Oct. 27, 1922,

To City Superintendents of Kansas,
Gentlemen.

I am making a study of the "Kansas Free Dental Inspection Law", and would like to have the following information. This questionnaire is being sent to all the city superintendents in Kansas. (712 in all) Your co-operation will be appreciated. Please check with an X in the column marked "yes" or the one marked "no". Thank you. J.A.Fleming.

Yes NO

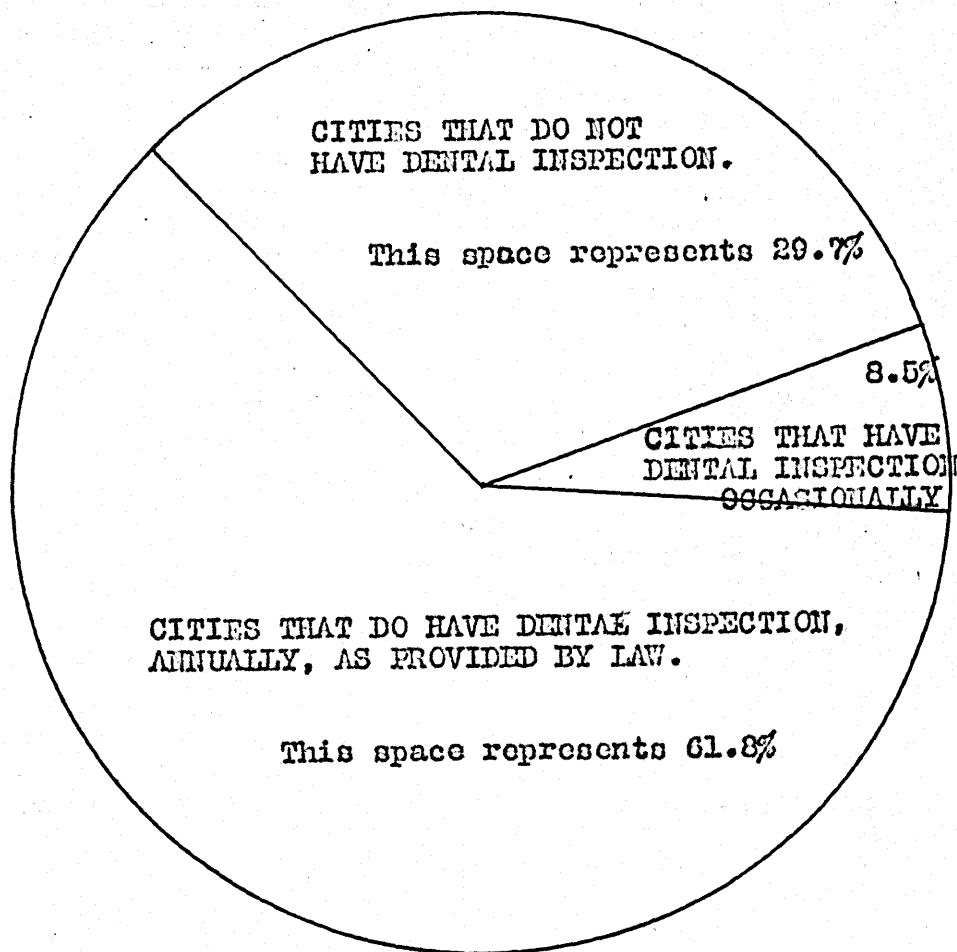
1. Do you have "Free Dental Inspection", annually, as provided for in the Kansas School Laws?
2. Is this inspection held in the school building?
3. Is this inspection held in the Dentist's office?
4. Do your Dentists do this work free?
5. Do you use all your resident Dentists?
6. Do you have a full time school Dentist?
7. Do you have a part time school Dentist?
8. If you pay your dentist by the month, how much?
9. If you pay him by the year, how much?
10. If you pay him by the hour, how much?
11. If you pay him by the day, how much?
12. If you pay him so much per pupil, state amount.
13. During what month of the year is the inspection held?
14. If you do not have this inspection annually, how often do you have it?
15. What % of the pupils do you find exempt by having been inspected within the last three months?
16. What use is made of the records you keep?
17. Does your school provide for any free dental clinic work? If so, what is the nature and extent of the work done? Please send a copy of report if such is available.
18. Do you do any follow-up work? If so what is the nature and extent of the work done? Please send copy of report if such is available.

SUMMARY OF DATA OF DENTAL INVESTIGATION.

Question.	First.	Second.	Third.	All cities.
1.	9	44	149	202
2.	9	33	127	181
3.	0	10	20	30
4.	2	10	27	39
5.	4	25	51	80
6.	0	0	0	0
7.	3	2	1	6
8.	1	1	1	3
9.	0	2	3	5
10.	0	0	3	3
11.	6	19	47	72
12.	0	4	16	20
13.				
Fall	5	27	72	104
Winter	1	3	26	30
Spring	1	1	8	10
All year	3	1	1	5
14.	0	0	0	0
15.	3	13	39	55
16.	4	18	39	61
17.	2	8	3	13
18.	5	18	8	31

THE STATUS OF DENTAL INSPECTION IN KANSAS

The summary of data of the 327 cities answering the Questionnaire.



This diagram shows very clearly the comparative number of cities that have dental inspection, annually, as provided by law, those that have it occasionally, and those that do not observe the law.

INTERPRETATION OF DATA

The Writer feels justified in considering these data as typical of all the cities of Kansas for two reasons:

(1) 50% of all cases are usually accepted as a fair random sample and these figures represent 56.8%; (2) ninety of the 105 counties in Kansas are represented in the 327 cities that replied to the questionnaire. 14 of the missing counties are in the extreme western part of the state and the fifteenth contains only one second class city. These counties are very sparsely settled and contain very few third class cities of any consequence, therefore it would seem that the elimination of these counties does not seriously affect a study of the cities of the state.

According to the Biennial Report of the State Superintendent of Public Instruction, Kansas Cities had enrolled in 1920 the following number of pupils: First class cities 62,706, second class cities 84,206, and third class cities 116,032. (37)

As stated previously in this study 90% of the first class cities, 71% of the second class cities, and 58.4% of the third class cities in Kansas observe the Dental Inspection Law.

Then, if as stated above these data are typical of the cities of Kansas, there are 183,983 children enrolled in the cities of Kansas who are being inspected annually as provided by law.

The foregoing facts are shown in the following table.

Table X

TOTAL ENROLLMENT OF SCHOOL CHILDREN IN KANSAS BY CLASSES OF CITIES, THE % OF SUCH CITIES THAT HAVE DENTAL INSPECTION ANNUALLY AS PROVIDED BY LAW AND THE NUMBER OF PUPILS ENROLLED IN THESE CITIES.

	First	Second	Third	All cities
Pupils enrolled	62,706	84,206	116,032	262,944
% of cities that observe law	90%	71%	58.4%	61.8%
Pupils that are inspected annually	56,435	59,786	67,762	183,983

This seems very encouraging but look at the other side. 21,035 school children who attend our city schools are inspected only occasionally, and 57,926 have no form of dental inspection what soever.

Perhaps the reader will say he is not convinced that these data are typical of all the cities of Kansas. He may contend that the cities that have dental inspection are the ones that answered the questionnaire. The writer is not trying to paint a bright picture; it is his business to portray the facts just as they are. Suppose then we say that no pupils are inspected except those reported then we would have 133,591 pupils being inspected annually and 129,353 pupils that are inspected only occasionally or not at all.

The reader is no doubt convinced that a considerable amount of good work is being done; for instance, it is no trifle to have 133,591 pupils inspected annually but it

is quite staggering to think of the many thousands who are being denied this privilege who are entitled to it by our Kansas law.

In 39 cities that have dental inspection, the Dentists do the work free. This is a tribute to the profession. No doubt the dentists in other towns would do the work free if it was called to their attention.

While it is to be regretted that only six schools have part time school dentists, only two have free dental clinics, only 55 exempt pupils according to law for having been inspected within three months, only 31 do follow-up work, and 61 use the records they keep yet the fact that these cities do these things may lead other cities to follow their example.

CONCLUSIONS.

The writer feels the following points are worthy of emphasis by being mentioned here:

As cities decrease in size the tendency to neglect or evade the law increases.

The most common place to hold Dental Inspection is in the school building.

The size of the city does not affect getting their Dental Inspection done free.

Second class cities use all their resident dentists in more cases than first and third class cities.

As schools decrease in size their chance of having a part time school dentist decreases.

Cities that pay their dentists by the year, really pay by the job.

The most common way to pay dentists is by the day and the most common price is \$10.00 per day.

Cities that have a part time school dentist hold this inspection all the year.

Fall is the most common time for holding this inspection.

Most cities do not exempt for having been inspected.

Only a few cities make use of the records they keep.

Only two schools have Free Dental Clinics.

Only a few cities have follow-up work.

SUMMARY

As a final summary, the typical city in Kansas has Free Dental Inspection, annually, as provided by law. This inspection is held in the school building, and the dentist is paid \$10. and expenses per day for his work. The inspection is held in the fall.

SUGGESTIONS

The writer believes in dental inspection for the following reasons:

There is ample evidence given in the Introductory Statement of this study to prove that school children have seriously defective teeth.

The experiment conducted by R. L. Sandwick, proved that the healthy child is also the mentally efficient child. (4)

The experience of Cambridge, England and Philadelphia, U. S. A. prove that the percentage of dental efficiency may be raised by the use of dental clinics. (8)(13)

The writer expects that the dental clinic will follow dental inspection in Kansas just as it has in the East and in other countries.

A number of the Superintendents said that some good work is being done in their cities on account of the inspection. The parents are taking their children to the dentist to have the work done suggested on his dental card.

This study shows that thirteen cities provide for some free dental work.

The writer expects that when all school children in Kansas are inspected, and the defects corrected, as far as possible, that the quality of school work will be greatly improved and the quantity greatly increased.

It is suggested by the writer that dental inspection be placed under the State Board of Health, with power to enforce it, and a penalty for failure to observe the law.

As it is now 29.7% of the cities in Kansas do not have dental inspection at all and 8.5% only occasionally. If the reader will turn to the Appendix of this study and examine the Status of Dental Inspection for the individual cities of Kansas; he will see the weakness of the observance of the dental inspection law at present. An examination of the Report of the Secretary of the State Board of Health, also given in the appendix of this study, will probably convince him it would be a good thing to have each County and City Superintendent make an annual Report to the Secretary of the State Board of Health so he can make a complete report for the state of Kansas. The report mentioned above as being in the appendix of this study is very suggestive and helpful although it includes only ten counties in 1920, twenty-seven counties in 1921, and nine Counties in 1922.

The writer further suggests that the Recommendations to Dental Inspectors, the Recommendations to School Superintendents, and the Instructions to school teachers, included in the Appendix of this study, be adopted and followed each year.

~~That~~ Rural schools and third class cities ^{should} be handled as a County unit, under the directions of the county superintendent. A complete Dental Inspection should be given to start with, then one or more county nurses placed in charge and carry on a continuous inspection.

First and second class cities should have a full and complete dental inspection to start with, then turn the

work over to a nurse, or nurses, to carry it on as a continuous inspection.

Where cities or Counties do not have nurses, and feel that they cannot get them, then I think a complete and careful examination should be given each fall. A city could follow the plan of Hays as given on the next page.

The writer feels that teachers should explain the law, and the use for such a law, in the Hygiene classes and every school should be taught Hygiene.

Each of the larger cities, and each county should have a free dental clinic. I don't believe that traveling clinics, as used in Germany, would be necessary in Kansas, on account of the easy means of travel.

Cities should use the records they keep. Eight uses are given under table 16, they are worth noticing.

The writer feels, that one of the greatest benefits that may come from dental inspection, is for the pupil to form the habit of consulting the dentist. This may be accomplished by urging pupils to seek exemptions from dental inspection.

Dr. J. F. Williams writes, in the Baltimore School Survey, 1920-1921, The worthwhileness of the examination of children is to be judged not by the number of children examined, entirely, nor by the number of defects found, but indeed, by the number of defective conditions, inimicable to health, that are corrected. The day of medical inspection is past; the day of medical service that secures at least 80% of corrections, and aims at 100% is before us. (14)

HOW IS THE WORK BEING DONE?

Some of the more progressive cities are achieving a high level of work. Some of the more progressive cities and what they are doing are given here.

Hutchinson has a part time school dentist, 75% of the pupils are exempt, the records are used to check-up corrections, a free dental clinic is maintained, and follow-up work is done.

Kansas City has a part time school dentist, and the records are used for follow-up work.

Leavenworth exempts 25% of the pupils, and does follow-up work.

Salina exempts 35% of the pupils.

Wichita has two part time school dentists and does follow-up work. 592 of the pupils were treated by these dentists the first year of dental inspection.

Lawrence has a part time school dentist, the dentists compare the records from year to year at inspection time, follow up work is done, and work is done free for poor children.

Winfield has a part time school dentist, use is made of the records for follow-up work, and the worst cases are corrected free.

Marysville exempts 25% of the pupils.

Hays has a free dental clinic, 90% of the pupils are exempt, and the records are used for follow-up work.

Ford has a part time school dentist, 60% of the pupils are exempt, the records are used to compare with school work as to quality and attendance. Follow-up work is done, and filling, cleaning, etc. are done free for all pupils.

The foregoing represents the best practice in Kansas.

In addition to the cities that have mentioned, the following cities are worthy of mention for some particular good feature although they do not combine a considerable number of the better practices.

Pittsburg, Caney, Dodge City, Garnett, Girard, Holton and Osborne have school nurses to look after their dental inspection.

Assara, Buhler, Buffalo, Canton, Chapman, Hamlin, Harveyville, Powhattan, Russel, Walton, and Weskan exempt 20% or more of the pupils for having been inspected within three months according to law.

Atchison, Bunkerhill, McCune, and Medicine Lodge compare the records at inspection time. The writer understands by this that the dentists in these cities compare the records of one year with the records of the next year to see what progress is being made.

The records in Caldwell, Cherryvale, Wellington, Burton, Durham, Effingham, Greenleaf, Milton, Mineral, Portis, and Scott City are used to check up corrections, or see if the work needed is done. The writer interprets this to mean that as the work suggested on the cards is done, note is made of it so that at the end of the year the person in charge knows just what has been accomplished.

Arkansas City, Emporia, Fredonia, Garden City, Manhattan, Chapman, and Ellis do dental work free for poor children.

Arkansas City, Augusta, Baxter Springs, Eldorado, Fredonia, Larned, McPherson, Manhattan, Neodesha, Dorrance, Elgin, Ellis, Huron, and Russel use the records for follow-up work.

Bromwell, Clearwater, Emmett, Englewood, and Stafford use these records for comparison.

Gardner and South Haven make a comparison of their dental inspection records with records of school work as to quality and attendance.

Kirwin uses its dental inspection records to check-on work needed.

Wade and Winona use their records from dental inspection to check-up.

Several of the counties are organized as a county unit for dental inspection. Cowley, Harvey, McPherson, and Nemaha counties are some of these.

McPherson County, according to I. C. Meyer, was formerly divided into districts, one for each dentist, they worked for \$10. per day and auto fare. The inspection usually cost from \$2. to \$4. per school.

R. G. Muller, of Nemaha County, employed dentists to make all the inspections at \$5. per school, and payment is made by the county treasurer. The order for payment is also an order on the school district treasurer for a refund of the amount out of their school funds.

In some of the counties the County Health Officer makes the dental inspection, while in others the County Red Cross Nurse does this work.

This study has shown that 202 cities, or 61.8% of those answering the questionnaire, have dental inspection; but only

six cities, or 2.97% have a part time school dentist. 55 of these cities exempt some pupils but only 16 exempt as many as 20%. 61 schools are making some use of the records they keep but 16 of these file them for reference leaving 45 schools that really make a constructive use of them. 13 of these 202 cities provide for some free dental work but only two actually have free dental clinics. 31 of these 202 cities also do some follow-up work.

Previously in this study it was stated that 29.7% of the cities in Kansas have no dental inspection at all and 8.5% have dental inspection occasionally. A more careful inspection shows that 22.2% more give a hurried inspection then forget all about it until the next year.

HOW SHOULD THE WORK BE DONE?

There are two forms of the work developing; one, that in which children are induced to have the work done. Hays is a good example of this form. The other, that in which the school has the work done free for the children. Ford is a good example of this form. The former will work in an intelligent and progressive community, but as a whole the writer approves the latter plan, as it will work in the average community.

Of course we are not going to be satisfied with "just" dental inspection, the defects found must be corrected and Oral Hygiene must be taught in such a manner as to prevent many bad mouths in the future.

Another question is "How are these bad mouths going to be corrected"? It is easy to decide how it should be done

in the larger cities. The writer suggests it be done in school clinics and paid for out of school money. But the smaller cities and Rural districts present a harder problem. it could be done by traveling clinics, as it was in Germany before the war, or the children could be taken to a centrally located County clinic. In this land of cheap and rapid transportation, perhaps the latter is the best. (8)

The idea is beginning to develop that bad teeth should be prevented. The public is not going to be satisfied with repairing them after they are bad.

Some of the Kansas schools have free work for poor children, only. There is a question as to whether dental work should be free to poor children, only, or to every one. If dental care is necessary in order that we can educate the children then dental care should be free to all, otherwise, it should be free to poor children only as most of the schools have it now.

WHAT STATE AGENCIES HAVE DONE.

The State Legislature passed the Kansas Free Dental Inspection Law. The State Board of Health in cooperation with the executive council of the State Dental Society has made and approved "Recommendations to Dental Inspectors and Instructions to School Teachers." (2) (17)

The State Board of Health, The Executive Council of the State Dental Society and the State Department of Education have made and approved "Recommendations to School Superintendents."

The State Board of Health has suggested that in order to get the best work done uniformity of procedure must be secured and in order to get uniformity of procedure uniform records must be used.

The State Board of Health also suggested that dental inspectors should be selected who can present the subject of dental hygiene to the children in an intelligent and attractive manner.

The State Dental Association, at the request of the State Board of Health, fixed \$10. per day, with traveling expenses, as a maximum fee for dental inspectors.

The State Board of Health has also furnished Consolidated blanks to all Counties and have tabulated the results sent in for the first three years the law has been in force. As the Board has no authority in the matter it has to content itself with receiving and tabulating those reports that were voluntarily sent in on the consolidated form blanks.

This work should have been placed under the State Board of Health with power to enforce it. Then all schools would have dental inspection and all Counties would report to the State Board of Health, instead of the few that now report. Ten counties reported in 1920, 27 counties in 1921, and nine counties in 1922. These reports include 34,965 children for the three years.

OBSTACLES TO BE OVERCOME.

The most serious obstacles to dental inspection are ignorance, selfishness, carelessness, parsimony, and Religious prejudice.

Many of our school board members are extremely ignorant on the topic of dental hygiene. They think what was good enough for them is good enough for the present generation of children. They do not realize the extremely poor condition of the mouths of our school children nor do they understand the seriousness of these bad mouths.

In cities where there are several dentists, the ones that do not get to do the work are dissatisfied. Some dentists would rather not have the work done at all if they can't do it.

Carelessness is one of the worst obstacles of all. The city or county superintendent, or school board member who is careless or indifferent is a menace to the cause. Because the work is left undone and no agitation is made to get it done whereas if there was opposition on the part of one of the above mentioned officers, the community would probably insist upon having the work done.

Some board members and some communities are too stingy to spend the money, and with school costs mounting every year it is not much wonder that the money minded folks are getting nervous.

Various prejudices are more of an obstacle than the average citizen realizes. Many people feel that dental inspection and dental care are individual matters and should be looked after by the parents. Religious prejudice^s are coming to be more of an obstacle as their numbers and influence increases.

The solution for the most of these obstacles is education. When school boards and their communities are properly educated, ignorance and Religious prejudice will fade; selfishness and parsimony will be over ruled, and carelessness can be over come by placing the free dental inspection under the State Board of Health with power to enforce it.

DOES DENTAL INSPECTION PAY?

The Cleveland Study showed an average increase in working efficiency, as the result of dental care, of 99.8%; if the 406,880

Pupils now in attendance in the schools of Kansas, could have their working efficiency doubled by dental care, Kansas certainly should provide it.

The Cleveland study proved conclusively that dental inspection and dental care improve attendance.

The reader's attention is also called to the city of Hays. Hays was cited as being very proficient in dental inspection. Its attendance is given in the following clipping;

The attendance of the Hays high school for September, 160 enrolled, was 98.8%. there were no tardies. School begins at eight o'clock in the morning. Three pupils drive five miles and two drive eight miles each morning. Last year the attendance for the entire year was 98.1%. The attendance of the grades for the year was 96.4%.

There is a law in Kansas making it compulsory for all children to attend school from the age of eight to sixteen years. It costs on the average \$35.55 per year to educate the grade pupils and \$72. per year to educate the high school pupils; if we are going to spend that much money on each child, We could certainly afford to put his mouth in a healthy condition and teach him to keep it that way so that his working efficiency may be increased 99.8% on the average, as the Cleveland study shows was done there. (7) (37)

Several investigations have been made to determine the value in money of a day spent in school by a boy, to him in after life. The most conservative say \$5. Then if his working efficiency was doubled, each day in school would be worth \$10. The more liberal estimates allow \$10. per day

for time spent in school. If this was doubled it would mean \$20. per day.

If, as seems to be true, personal efficiency and adequate oral hygiene are highly and positively correlated, then the annual loss through inadequate hygiene is stupendous.

THE TREND.

No Medical Group, Surgical Clinic, Hospital, or School is now complete without a competent Dental Surgeon. Even the large stores, factories, Life Insurance Companies, and so on now have a dentist and maintain him, as a distinct part of the company's service. (11)

Talks are given over Radio, columns are carried in the papers, and special reports are gotten out on the various phases of the teeth. (11)

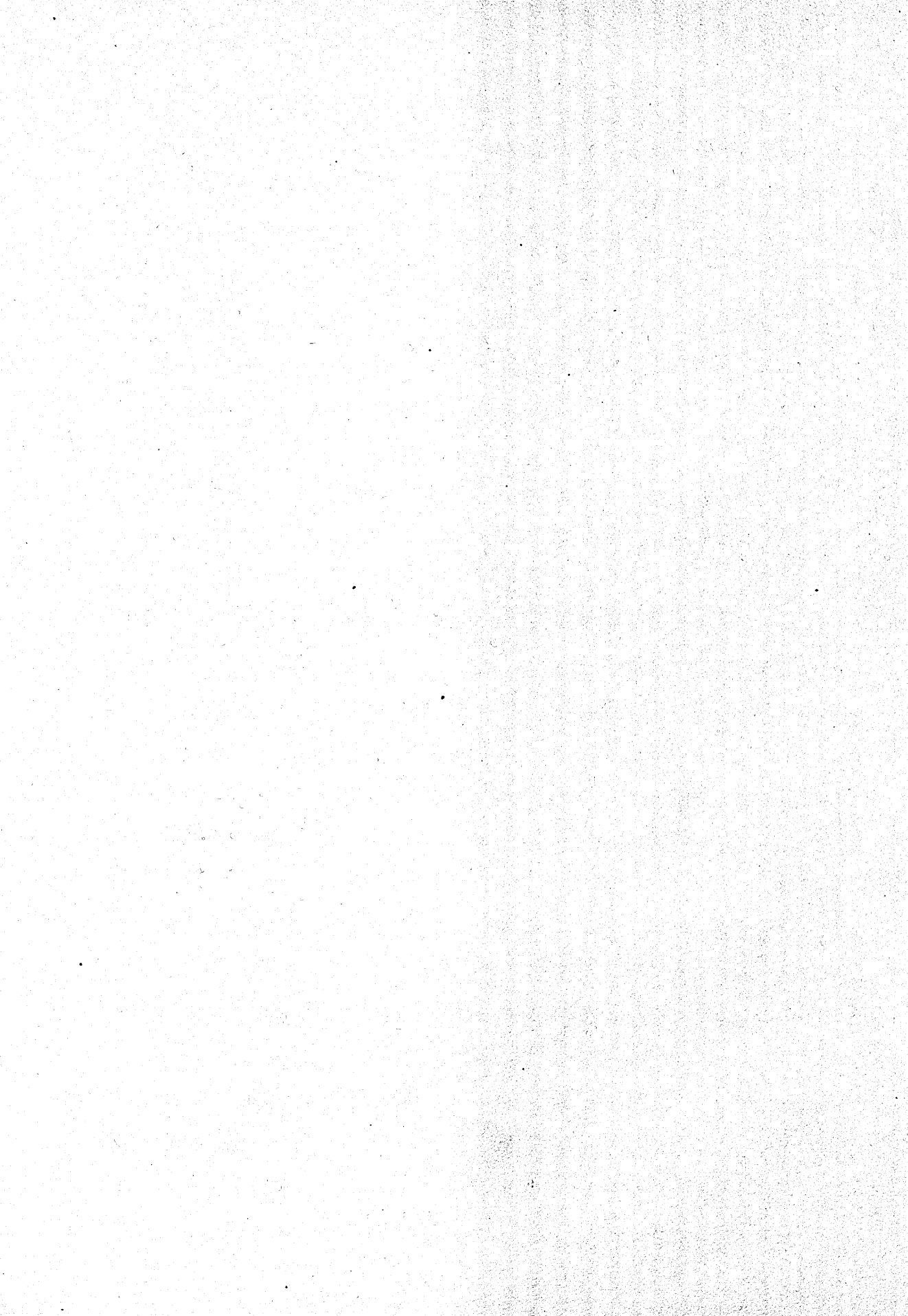
Columbia University recently published a bulletin announcing courses in Oral Hygiene. (38)

The State of Kansas has recently organized what is known as The Kansas Bureau of Child Research with headquarters at the State University. It was organized for the scientific study of child life through the cooperative effort of all groups in the state which are equipped and willing to contribute to such study.

The tendency now among dentists is to think that diet has a great deal to do with the teeth. Dr. E. V. McColum says, in the bulletin of the Kansas State Board of Health, "The Slogan, a clean tooth never decays, is not true; at least only partially true". The reader is referred to Dr. McColum's work at Johns Hopkins Hospital. (39)

In the Cleveland Experiment, lessons were given on masticating food, and tooth brush drills were held. (10)

Many schools are organizing "Modern Health Crusaders," with Oral Hygiene education in view. Three of the "health" chores, worked out for the "Crusaders, apply to the mouth. There are eleven of these chores in all. (40)



BIBLIOGRAPHY

1. Fisher, Irving. Report on National Vitality, Its Wastes, and Conservation, 138 pp. The Committee of One Hundred on National Health, Bulletin No. 30. pp 72-81
Washington, 1919.
2. Weaver, C.K., and Others. "Free Dental Inspection in the Public Schools of Kansas"; in Kansas State Dental Association Bulletin, vol. 4. No. 4
October, 1920.
3. Crumbine, S. J. "Free Dental Examination in Kansas"; in Kansas State Board of Health Bulletin, vol. 18. No. 10.
pp. 266-267. October, 1922.
4. Sandwick, R. L. "Correlation of Physical Health and Mental Efficiency"; in Journal of Educational of Educational Research, vol. 1. No. 3. pp. 199-203.
March 1920.
5. Gloyne, L. B. "Physical Examination in the Public Schools"; in Public Welfare, vol. 3. No. 4. pp. 629-631.
September, 1920.
6. Kansas Legislature, "Free Dental Inspection"; in the Laws Relating to the Common Schools of Kansas, 1915. p. 56
7. Kansas Legislature. "Free Dental Inspection"; in Laws Relating to the Common Schools of Kansas, 1919. p. 64.
8. Hoag, E. B., and Terman, L. M. Health Work in the Schools 321 pp. Houghton Mifflin Co., Boston, 1914.
9. Sherbon, F. L. Report of the Kansas Children's Code Commission, Topeka, Kansas. January, 1921. p. 12.

10. Ebersole, W. G. Report of Scientific Experiments. 35 pp.
The National Mouth Hygeine Association, Cleveland, 1912.
11. Loope, W. A. "Dental Facts by Radio"; in Dental Facts,
Chicago, vol. 12. No. 2. pp. 68-69. February, 1924.
12. Ayers, L. P. The Relation of Physical Defects to School
Progress, 12 pp. Division of Education, Russel Sage
Foundation, Bulletin No. 61. New York, 1909.
13. National Educational Association; "Proceedings"; Depart-
ment of Child Hygiene, 1921, pp. 379-383.
14. Strayer, George Drayton., and Others. The Baltimore
Survey, vol. 2. Part v. p. 257. Baltimore, 1920-21.
15. Mendenhall, Edgar. "The Trend", in The Techne, Pitts-
burg, Kansas. June, 1921.
16. Mendenhall, Edgar. "The Trend", in The Techne, Pitts-
burg, Kansas. March, 1922.
17. Weaver, C. K., and Others. "Oral Hygiene in Kansas";
in Oral Hygiene, Wichita, Kansas. February, 1923.
18. Card, Wm. H. "Oral Hygiene in Minnesota"; in Oral Hy-
giene, Wichita, Kansas. April, 1923.
19. Bronson, J. F. "Oral Hygiene in Mississippi"; in Oral
Hygiene, Wichita, Kansas. October, 1923.
20. Barton, C. W. "International Oral Hygiene"; in Oral
Hygiene, Wichita, Kansas. October, 1923.
21. Davis, Wm. R. "School Dentistry in Flint"; in Oral Hy-
giene, Wichita, Kansas. December, 1921.
22. Greenhood, Charlotte S. "Oral Hygiene in California";
in Oral Hygiene, Wichita, Kansas. March, 1923.

23. Freidinger, H. L. "An Illinois School Clinic"; in Oral Hygiene, Wichita, Kansas. March, 1923.
24. Card, Wm. H. "Dental Clinics in Minnesota"; in Oral Hygiene, Wichita, Kansas. December 1920.
25. Nassau County, New York. "Dental Care for School Children"; in Oral Hygiene, Wichita, Kansas. December 1920.
26. Tenny, Lilian E. "Oral Hygiene in Progress in Des Moines Public Schools"; in Oral Hygiene, April, 1923.
27. Dye, Ernest C. "Oral Hygiene in South Carolina"; in Oral Hygiene, Wichita, Kansas. January, 1923.
28. Randell, W. M. "Oral Hygiene in Kentucky"; in Oral Hygiene, Wichita, Kansas. January, 1923.
29. Towne, R. S. "Oral Hygiene in North Dakota"; in Oral Hygiene, Wichita, Kansas. January, 1923.
30. Buckner, A. G. "Oral Hygiene in Tennessee"; in Oral Hygiene, Wichita, Kansas. January, 1923.
31. Timmerman, L. A. "Oral Hygiene in New York State"; in Oral Hygiene, Wichita, Kansas. January, 1923.
32. Goode, M. J. "Oral Hygiene in Idaho"; in Oral Hygiene, Wichita, Kansas. January, 1923.
33. Peay, Jas. T. "Oral Hygiene in Arkansas"; in Oral Hygiene, Wichita, Kansas. January, 1923.
34. Banker, Helen M. "Oral Hygiene in Hawaii"; in Oral Hygiene, Wichita, Kansas. January, 1923.
35. Bourn, W. M., Stephens, C. E., and Houston, Tex. "Oral Hygiene in Texas"; in Oral Hygiene in Wichita, Kansas. January, 1923.

36. Wilson, H. W. "Oral Hygiene in Colorado"; in Oral Hygiene, Wichita, Kansas. February, 1923.
37. Wooster, L. E., Twenty second Biennial Report, 393 pp. Topeka, Kansas. 1921.
38. Columbia University, "Course in Oral Hygiene" 22nd series, No. 20. April, 1922.
39. McCollum, Dr. E. V. "Nutrition and Dental carries," in Kansas State Board of Health Bulletin Vol. 18. No. 12.
40. National Tuberculosis Association, "The Modern Health Crusader", New York, 1921.

APPENDIX

- (a) THE STATUS OF DENTAL INSPECTION IN EACH CITY.
- (b) REPORT OF THE KANSAS STATE BOARD OF HEALTH.
- (c) RECOMMENDATIONS TO DENTAL INSPECTORS.
- (d) RECOMMENDATIONS TO SCHOOL SUPERINTENDENTS.
- (e) INSTRUCTIONS TO SCHOOL TEACHERS.
- (f) CARDS USED FOR DENTAL INSPECTION.
- (g) EXTRACTS FROM PERSONAL LETTERS.
- (h) SUMMARY OF MINNEAPOLIS DENTAL INSPECTION.
- (i) EXTRACTS FROM MONTGOMERY COUNTY DENTAL INSPECTION.

Oct. 27, 1922.

To City Superintendents,
Gentlemen:

I am making a study of the "Kansas Free Dental Inspection Law", and would like to have the following information. This questionnaire is being sent to all the city superintendents in Kansas. (712 in all) Your co-operation will be appreciated. Please check with an X in the column marked "yes" or the one marked "no". Thank you. J.A.Fleming.

1. Do you have "Free Dental Inspection", annually, as provided for in the Kansas School Laws?----
2. Is this inspection held in the school building?
3. Is this inspection held in the Dentist's office?
4. Do your Dentists do this work free?
5. Do you use all your resident Dentists?
6. Do you have a full time school Dentist?
7. Do you have a part time school Dentist?
8. If you pay your Dentist by the month, how much?
9. If you pay your Dentist by the year, how much?
10. If you pay him by the hour, how much?
11. If you pay him by the day, how much?
12. If you pay him so much per pupil, state amount.
13. During what month of the year is the inspection held?
14. If you do not have this inspection annually, how often do you have it.
15. What % of the pupils do you find exempt by having been inspected within the last three months?
16. What use is made of the records you keep?
17. Does your school provide for any free dental clinic work? If so, what is the nature and extent of the work done? Please send copy of report if such is available.
18. Do you do any follow-up work? If so, what is the nature and extent of the work done? Please send copy of report if such is available.

THE STATUS OF DENTAL INSPECTION IN EACH CITY.

CITIES THAT OBSERVE THE LAW.

FIRST CLASS CITIES.	where held	use all Dentists	Part time Dentists	How Paid	when held	% Ex-empt.	use of records	Free Clinic	Follow up work
Atchison	School bld.	yes	no	Day \$10.00	Winter	0	yes	no	no
Coffeyville	School bld.	no	no	Day \$10.00	Fall	0	no	no	no
Hutchinson	School bld.	no	yes	Day \$8.00	Fall	75%	yes	yes	yes
Kansas City	School bld.	no	yes	Month \$40.00	Spring all year	0	yes	no	yes
Leavenworth	School bld.	yes	no	Day \$10.00	Fall	25%	no	no	yes
Parsons	School bld.	yes	no	Free	Fall all	0	no	no	yes
Pittsburg	School bld.	no	no	Nurse year	year	0	no	no	no
Salina	School bld.	yes	no	Day \$10.00	Fall	35%	yes	no	no
Wichita	School bld.	no	yes(2)	Day \$13.00	Fall all year	0	no	no	yes
SECOND CLASS CITIES.									
Abeline	School bld.	yes	no	year \$50.00	Fall		yes	no	yes
Anthony	School bld.	yes	no	Pupil 10%	Fall	2%	no	no	no
Arkansas City	School bld.	no	no	Day \$10.00	Fall	1%	yes	no	yes
Augusta	School bld.	no	no	Day \$15.00			yes	no	yes
Baxter Springs	School bld.	yes	no		Fall		yes	no	yes
Beloit	D's office	no	no	Free			no	no	no
Bonner Springs	School bld.	no	no	Day \$10.00	Fall				
Burlington	School bld.	yes	no		Fall		no	no	no
Caldwell	D's office	no	no	Day \$10.00	Fall		yes	no	no
Caney		no	no	Nurse			no	no	no
Cherryvale	School bld.	yes	no	Day \$15.00	Winter		yes	no	no
Clay Center	School bld.	no	no	Pupil 10%			no	no	no
Columbus	School bld.	no	no		Winter		no	no	no
Dodge City		no	no	Nurse					
El Dorado	School bld.	no	no	Day \$10.00	Fall	1%	yes	no	yes
Emporia	School bld.	yes	no	Day \$10.00	Fall		no	no	yes
Florence	School bld.	yes	no	Day \$10.00	Fall	10%	no	no	no
Fredonia	School bld.	yes	no	Free	Fall		yes	no	yes
Garden City	School bld.	yes	no	Day \$10.00	Fall	5%	yes	no	yes
Garnette	D's office	no	no	year \$50.00			no	no	no
Girard		no	no	Nurse			no		
Harper	D's office	yes	no	Free	Winter		no	no	no

	where held	use all Dentists	Parttime Dentist	How paid	when held	% Ex-empt	use of records	Free Clinic	Follow up work
Hays	D's office	yes	no	Free	fall	90%	yes	yes	yes
Hiawatha	School bld	yes	no	Pupil 12 1/2¢	Spring	1%	no	no	no
Holton	D's office	yes	no	Free	fall	10%	no	no	yes
Horton	School bld	yes	no	Free			no	no	no
Kingman	School bld	no	no	Pay \$10.00	fall		no	no	no
Kinsley	D's office	yes	no	Free	fall		no	no	no
Larned	School bld	yes	no	Pay \$10.00			yes	no	yes
Lawrence	School bld	no	yes	ninth year \$70.00	all year		yes	no	no
Liberal	School bld	yes	no	Free	fall		no	no	no
Lindsborg	D's office	no	no	Pay \$10.00	fall		no	no	no
McPherson	School bld	no	no	Pay \$10.00	fall		yes	no	yes
Manhattan	School bld	no	no	Pay \$10.00	fall		yes	no	yes
Marysville	School bld	yes	no	Free	fall	25%	no	no	no
Neodesha	School bld	yes	no	Free			yes	no	yes
Newton	School bld	yes	no	Pay \$10.00	fall	5%	no	no	no
Osborne	School bld	no	no	nurse pay			no	no	no
Paola	School bld	yes	no	Pay \$10.00	fall	10%	no	no	no
Sabetha	School bld	yes	no	Pay \$10.00	fall	2%	yes	no	yes
Scammon	School bld	no	no		fall		no	no	yes
Sterling	School bld	yes	no	Pay \$10.00	fall	5%	no	no	no
Wellington	School bld	yes	no	Pay \$10.00	fall		yes	no	yes
Windfield	School bld	no	yes				yes	no	yes

THIRD CLASS CITIES

Admire	School bld	no	no	Pupil 50¢			no	no	no
Alden	School bld	yes	no	year \$10.00	winter		no	no	no
Alta Vista	School bld	no	no	Free	Spring		no	no	no
Alexander	D's office	yes	no	Pay \$10.00	fall		yes	no	no
Alma	School bld	no	no				no	no	no
Assaria	School bld	no	no	Pupil 25¢	fall	20%	no	no	no
Baldwin	School bld	no	no	Pay \$10.00	winter	5%	no	no	yes
Bancroft	School bld	no	no	Free	fall		no	no	no
Bern	School bld	no	no		fall		no	no	no
Beattie	D's office	yes	no	Pupil 25¢			no	no	no
Benedict	School bld	no	no	Pay \$10.00	winter		no	no	no

	Where held	use all dentists	Parttime Dentists	How Paid	When held	% Ex- empt	Use of records	Free clinic	Follow up work
Benton	School Bldg	no	no		Fall		no	no	no
Beeler	School Bldg	yes	no		Spring	5%	no	no	no
Bozell	School Bldg	no	no		winter		no	no	no
Brownell	School Bldg	no	no		Fall		yes	no	no
Burden	School Bldg	no	no				no	no	no
Burton	School Bldg	no	no	Pay \$10.00	Fall		yes	no	no
Bunkerhill	School Bldg	no	no	Pay \$10.00	winter		yes	no	no
Burdette	School Bldg	no	no	Pay			no	no	no
Buhler	School Bldg	no	no		winter	50%	no	no	no
Buffalo	School Bldg	yes	no		Spring	75%	no	no	no
Burns	School Bldg	no	no				no	no	no
Cambridge	School Bldg	no	no				no	no	no
Canton	School Bldg	yes	no	Pay \$4.00	Fall	25%	no	no	no
Cassody	School Bldg	no	no	Free	Fall		yes	no	no
Cedar Point	School Bldg	no	no				no	no	no
Centralia	School Bldg	no	no	year \$15.00	Fall		yes	no	no
Chapman	D & office	yes	no		Fall	90%	no	no	no
Cimmaron	School Bldg	yes	no	Pay \$10.00	Fall	5%	no	no	no
Clearwater	School Bldg	no	no			12%	yes	no	no
Clayton	School Bldg	no	no	Pupil 50%	winter		no	no	no
Copeland	School Bldg	no	no	Pay			no	no	no
Council Grove	School Bldg	yes	no	Pay \$5.00	Fall		no	no	no
Coats	School Bldg	no	no	Free	Spring		no	no	no
Covert	School Bldg	no	no	Pay \$20.00	Fall		no	no	no
Cunningham	School Bldg	yes	no	Pupil	winter	5%	no	no	no
Cullison	School Bldg	no	no				no	no	no
Delia	School Bldg	no	no	Free			no	no	no
Douglas	School Bldg	yes	no	Pay		2%	no	no	yes
Dover	School Bldg	no	no				no	no	no
Darrance	School Bldg	yes	no	Pay \$10.00			yes	no	no
Durham	School Bldg	no	no				yes	no	no
Dunlap	School Bldg	no	no	year \$10.00			no	no	no
Dwight	School Bldg	yes	no	Pay			no	no	no
Effingham	School Bldg	no	no	Free	Fall		yes	no	no
Elk City	School Bldg	no	no	Pay \$15.00	winter		no	no	no
Elsworth	D & office	yes	no	Pupil 50%	winter		no	no	no

	where held	use all dentists	part time dentists	How Paid	when held	% Ex- empt	use of records	Dree Clinic	Follow up work
Elgin	School bld	yes	no		Fall		yes	no	yes
Ellis	School bld	yes	no	Day \$20.00	winter	10%	yes	no	no
Emmett	School bld	no	no	Free	Fall	15%	yes	no	no
Englewood	School bld	no	no	Free \$25.00	Fall		yes	no	no
Enterprise	D. S. office	yes	no	Pupil 5%	Fall		no	no	no
Eudora	School bld	yes	no	Pupil 20%	Fall		no	no	no
Eskridge	School bld	yes	no	Free		2%	yes	no	no
Ford	D. S. office	no	yes	month \$25.00	all year	60%	yes	no	yes
Frankfort	School bld	yes	no	Free	Fall	5%	no	no	no
Garfield	School bld	no	no		Fall		no	no	no
Gardner	D. S. office	yes	no		Fall		yes	no	no
Garrison	School bld	no	no		winter		no	no	no
Glasco	School bld	no	no	Free			no	no	yes
Glen Elder	School bld	no	no	Free			no	no	no
Goff	School bld	no	no				no	no	no
Grinnell	School bld	yes	no	Pupil 50%	Fall	10%	no	no	no
Greenleaf	School bld	yes	no	Day \$10.00	Fall		yes	no	no
Gypsum	D. S. office	no	no	Day \$10.00	Fall	5%	no	no	yes
Halstead	School bld	no	no	Day \$10.00	winter	10%	no	no	no
Hamlin	School bld	no	no	Day \$10.00	Fall	75%	no	no	no
Harveyville	School bld	yes	no	Day \$10.00	winter	30%	no	no	no
Hanover	School bld	no	no	Day \$10.00	Fall		no	no	no
Holcomb	School bld	yes	no	Day \$10.00	Fall		no	no	no
Highland	D. S. office	yes	no		Fall		no	no	no
Hillsboro	School bld	no	no				no	no	no
Havensville	School bld	no	no				no	no	no
Holyrood	D. S. office	no	no				no	no	no
Hope	School bld	no	no				no	no	no
Hazelton	School bld	no	no		Fall		no	no	no
Huron	School bld	no	no	Free	Fall	2%	yes	no	no
Jarbalo	School bld	no	no		Fall		no	no	no
Kirwin	School bld	yes	no		Fall		yes	no	no
Kiowa	School bld	yes	no		Fall		no	no	no
Lake city	School bld	no	no	Free	Fall		no	no	no
Lansing		no	no		Fall		no	no	no

	where held	use all dentists	part time dentists	how paid	when held	% exempt	use of records	free clinic	follow up work
La Cygne	School held	yes	no	Pay			no	no	no
Leonardville	School held	no	no	Free	Fall		no	no	no
Leon	School held	no	no	pay \$10.00	Fall		no	no	no
Linwood	School held	no	no		Fall	1%	no	no	no
Logan	School held	yes	no	pay \$15.00	Spring		no	no	no
Longford	D's office	no	no	Free	Fall		yes	no	no
Lovewell	School held	no	no				no	no	no
Lyndon	School held	no	no		winter		no	no	no
McCune	D's office	yes	no	pay \$10.00	Fall		yes	no	yes
McLouth	School held	no	no	pay \$12.00			no	no	no
Manchester	School held	no	no	Pupil 50%			no	no	no
Marquette	School held	no	no	Free	Fall		no	no	no
Meriden	School held	no	no	pay \$12.50	Fall		no	no	no
Medicine Lodge	School held	no	no		Fall		yes	no	no
Milton	School held	yes	no	hour \$1.00	Fall	18%	yes	no	no
Mineral	School held	no	no	Free	Fall		yes	no	no
Montezuma	School held	no	no	pay \$20.00	Fall		no	no	no
Morganville	School held	no	no		Fall		no	no	no
Morrill	D's office	yes	no	Free	Fall		no	no	no
Muscatah	School held	yes	no		Fall		no	no	no
Munden		no	no				no	no	no
Ness City	D's office	yes	no				no	no	no
Netawaka	School held	no	no				no	no	no
Norwick	School held	no	no	Hour			no	no	no
Nortonville	School held	no	no	pay \$10.00	Fall		no	no	no
Oberlin	D's office	yes	no	Pupil 50%	Spring	5%	no	no	no
Oneida	School held	no	no		Fall	5%	no	no	no
Oxford	School held	no	no		Fall		no	no	yes
Powhattan	School held	no	no		Fall	20%	no	no	no
Paturin	D	no	no	pay \$10.00	Spring		no	no	no
Phillipsburg	School held	yes	no	pay \$10.00	winter		no	no	no
Plains	School held	no	no	Free			yes	no	no
Portis	School held	no	no	pay \$25.00	Fall	1%	yes	no	no
Protection	D's office	yes	no	Free	winter		no	no	no
Quenemo	School held	yes	no	pay \$10.00			no	no	no

	where held	use all Dentists	Part time Dentists	How paid	when held	% Ex- empt	use of records	Free Clinic	Follow up work
Raymond	School bed	no	no	Pupil 50%	winter		no	no	no
Riley	D's office	yes	no	Pupil 15%		2%	no	no	no
Roxburg	School bed	no	no	Day \$10.00			no	no	no
Russell	School bed	yes	no	Free	winter	20%	yes	no	no
Solomon	School bed	no	no	Free	Fall		no	no	no
Savonburg	School bed	no	no		winter		no	no	no
Scranton	School bed	no	no	Day \$10.00	winter	6%	no	no	no
Scandia	School bed	no	no		winter		no	no	no
Scott City	School bed	no	no	Day \$15.00	Fall	3%	yes	no	no
Sedgwick	School bed	yes	no	Day \$10.00	Fall		no	no	no
Selden	School bed	yes	no	Pupil 25%			no	no	no
Sharon	School bed	no	no	Free	Fall		no	no	no
Stafford	School bed	yes	no	Day \$10.00	winter		yes	no	no
Stockton	School bed	yes	no	Free	Fall		no	no	no
St. John	School bed	yes	no	Day \$10.00	winter		yes	no	no
South Haven	School bed	no	no				yes	no	no
Spearville	School bed	yes	no	Day \$10.00			no	no	no
Tescott	School bed	no	no	Pupil 25%			no	no	no
Tonganoxie	School bed	no	no		Fall		no	no	no
Towanda	School bed	yes	no	Hour	winter	4%	no	no	no
Tyro	School bed	yes	no	Free		5%	no	no	no
Udall	School bed	no	no	Day \$18.00	Fall		yes	no	no
Walton	School bed	no	no		Fall	50%	yes	no	no
Waterville	School bed	yes	no	Day \$10.00	Fall	3%	no	no	no
Waldo	School bed	no	no		Fall		yes	no	no
Wamego	School bed	no	no	Day	Fall		no	no	no
Weskan	School bed	no	no	Free	Fall	40%	no	no	no
Whiting	D's office	no	no	Day \$10.00	Fall	6%	yes	no	no
White Water	D's office	no	no	Free	Fall	1%	yes	no	no
Winona	School bed	no	no	Pupil 25%	Fall		yes	no	no
Wilson	School bed	no	no		winter		no	no	no
Wilsey	School bed	no	no		Fall		no	no	no

CITIES THAT HAVE DENTAL INSPECTION BUT NOT

SECOND CLASS CITIES

	Where held	Use all Dentists	Net time Dentists	How paid	When held	% Ex- empt	Use of records	Free clinic	Follow up work
Chanute	School bld	no	no	Day \$10.00		15%	yes	no	no
Hoisington	D. S. office	yes	no	Day \$10.00	Fall	no	no	no	no
Minneapolis	School bld	yes	no	Pupil 15%	Fall		no	no	no
Oswego	D. S. office	yes	no		winter	75%	no	no	no
Ottawa	School bld	no	no		winter		no	no	yes
Pratt	School bld	yes	no	Day \$10.00			yes	no	no

THIRD CLASS CITIES.

Alton	School bld	no	no	Day \$25.00			yes	no	no
Altamont	D. S. office	yes	no		15	15%	no	no	no
Ashland	School bld	yes	no	Hour \$1.00	Fall		no	no	no
Burlingame	School bld	yes	no	Day \$10.00	-	-	no	no	no
Edna	D. S. office	no	no	Pupil			no	no	no
Ellingwood	D. S. office	no	no		Fall		no	no	no
Fowler	School bld	yes	no		Fall		no	no	no
Ingalls	School bld	no	no		Fall		no	no	no
Iona	School bld	no	no	Day \$10.00	Spring		no	no	no
Le High									
Latham	School bld	no	no				no	no	no
Maize	School bld	no	no	Day \$10.00			no	no	no
Onaga		no	no	Free			no	no	no
Princeton	D. S. office	no	no		Fall		no	no	no
Peabody	D. S. office	yes	no		Spring		no	no	no
Pawnee Rock		no	no				no	no	no
Preston	School bld	no	no		winter		no	no	no
Sedan	School bld	yes	no	Free	Fall	0	no	no	no
Smith Center	School bld	yes	no		Spring	0	no	no	no
Vermillion		no	no				no	no	no
Washington	School bld	no	no		Fall		no	no	no
White Cloud	School bld	no	no			0	no	no	no

CITIES THAT DO NOT HAVE FREE DENTAL INSPECTION.

FIRST CLASS CITIES.

Fort Scott

SECOND CLASS CITIES.

Chetopia

Concordia

Eureka

Frontenac

Goodland

Greensburg

Humboldt

Iola

LaHarpe

Marion

Norton

Olathe

THIRD CLASS CITIES.

Adams

Almena

Allen

Americus

Antelope

Arlington

Arcadia

Arma

Athol

Barclay

Bird City

Bronson

Bogue

Bushong

Cherokee

Cheney

Climax

Claflin

Cottonwood Falls

Cockerill

Dearing

DaSota

Edgerton

Edwardsville

Edmond

Elk Hart

Erie

Franklin

Garden Llaine

Gem

Geuda Springs

THIRD CLASS CITIES CONTINUED

Gove

Hamilton

Hartford

Hewins

Howard

Jetmore

Kackley

Keats

Kismet

Lakin

Lenora

Lecompton

LeRoy

Lorraine

Longton

Lincolnville

Lincoln

Madison

Milan

Miltonvale

Miller

Mound City

Mulinville

Mc Cracken

Niotaze

Palco

Piper

Plainville

Pleasanton

Pomona

Pretty Prairie

Quintner

Ramona

Reading

Rexford

Rock Creek

Sawyer

Severy

Simpson

Stillwell

Sylvia

Sylvan Grove

Spring Hill

Seamon School

St Francis

Trusdale

Virgil

Vilas

Walnut

Webster

Willmore

Woodson

Washburn Rural

FREE DENTAL EXAMINATION IN KANSAS

The tabulation of the free dental inspection of 34,965 children is presented for the information of the readers of the Bulletin. Ten counties made a return to the State Board of Health of their examinations in 1920, 27 counties in 1921, and 9 counties in 1922. The number of children examined whose reports are herewith tabulated would seem to be sufficiently large to fairly represent the physical condition, particularly as it relates to oral hygiene, of Kansas school children.

A study of the conditions found is calculated to jolt us out of our attitude of snug complacency, for if it indicates anything, it is that of a woeful lack of health supervision of Kansas school children, and an equal lack of intelligent understanding and care on the part of the parents of these same children. It makes it perfectly clear why it was that there were so few perfect specimens of manhood examined by the medical boards during the war, and why, approximately, one-third of those who were examined were so seriously physically unfit that they were rejected for service. One thousand eight hundred forty-seven abscesses and 13,534 cavities in the permanent teeth, to say nothing of the 12,343 cavities in the temporary teeth, might furnish the answer to some of the early cases of heart disease and malnutrition, and other below-par physical conditions from which many of these children are suffering.

It would seem to be one of the most worth while tasks to which the local authorities of every community could apply them selves, to make an effort to discover the physical handicaps of their children, and to put it squarely up to the parents of those children, and to provide for the relief of the physical handicaps that may be found.

The following table tells its own story:

STATE DENTAL REPORT FOR 1920-1921-1922.

	1920	1921	1922	Final Totals of all 3 years
	Totals	Totals	Totals	
Boys.....	6203	7823	3224	17250
Girls.....	6586	7795	3334	17715
Total No. of children...	12789	15618	6558	34965
Normal Weight.....	678	677	289	1644
Over Weight.....	4531	4237	1682	10450
Under Weight.....	6718	6463	3081	16262
Over 10% over weight....	1629	1429	696	3754
Over 10% under weight...	2687	2303	1313	6303
Bright.....	7986	7212	3576	18774
Industrious.....	7492	7174	3414	18080
Dull.....	1733	1463	550	3476
Inattentive.....	1952	1442	610	4004
Nervous.....	1548	1155	446	3149
High-strung.....	582	486	189	1257
Difficult to govern.....	431	484	167	1082
Failed in grades.....	1335	1000	364	2699
Absent often.....	752	519	194	1285
Healthy.....	8049	6880	3162	18091
Well developed.....	9035	8132	3589	20756
Energetic.....	6037	4910	2489	13436
Poorly developed.....	1398	834	349	2581
Listless, inactive.....	832	553	250	1635
Clear.....	8150	6888	2665	17703
Sallow.....	1718	903	453	3074
Pale.....	795	402	221	1508
Flabby.....	102	64	32	198
Eruption.....	441	399	187	1027
Defective vision.....	1940	1526	514	3980
Other defects (eyes)....	247	121	55	423

	1920	1921	1922	20-22
Defective hearing.....	669	447	104	1220
Irregular teeth.....	1478	739	247	2464
Prominent teeth.....	451	331	103	885
Mouth breathing.....	1169	1085	393	2647
Coated tongue.....	1125	546	157	1828
Nasal voice.....	582	299	170	1051
Nasal discharge.....	337	93	86	516
Enlarged glands.....	1093	810	181	2084
Pain in joints.....	443	355	126	924
Headache, never.....	3547	3266	1272	8085
Headache, seldom.....	4683	3770	1497	9950
Headache, often.....	1472	995	421	2888
Worse in A.M.....	670	423	270	1372
Worse in P.M.....	1942	1500	571	4013
Toothache, never.....	5156	4140	1847	11143
Toothache, seldom.....	3140	2329	966	6435
Toothache, often.....	690	422	145	1257
Indigestion, never.....	4644	3696	1646	9986
Indigestion, seldom.....	2328	2049	811	5188
Indigestion, often.....	397	300	96	793
Easily out of breath.....	1211	800	371	2382
Get tired easily.....	1097	714	304	2115
Condition of mouth, good..	6782	8216	3771	13769
Condition of mouth, fair..	4129	4859	1792	10780
Condition of mouth, bad..	542	872	556	1973
Condition of gums, good..	8598	8913	4249	21760
Condition of gums, fair..	2270	3741	1150	7161
Condition of gums, bad..	260	573	248	1081
Abscesses.....	529	752	566	1847
Stained teeth.....	7472	9066	2607	19165
Tartar.....	1527	2587	771	4885
Cavities in permanent teeth.....	5558	5579	2397	13534
Cavities in temporary teeth.....	4257	5199	2887	12343
Malocclusion, marked.....	728	977	459	2164
Malocclusion, moderate...	2153	2567	1482	6202
Malocclusion, none.....	6393	7765	3384	17542
Mouth breathing, marked..	354	484	140	978
Mouth breathing, moderate.	1357	295	1032	3684
Mouth breathing, none....	7129	9002	3713	19844
Brushes teeth regularly..	3872	3717	2330	9919
Brushes teeth occasionally-	6132	7124	3210	16466
Brushes teeth, never.....	1622	7144	518	4284
Other dental defects.....	214	100	69	383
Referred to dentist.....	4112	3203	985	8300
Not referred to dentist..	1714	1534	416	3664
Dental defects corrected.	931	901	111	1943

RECOMMENDATIONS TO DENTAL INSPECTORS

Adopted by the Executive Council of the State Dental Society, with the co-operation of the State Board of Health.

- I A.--Provide yourself with a sufficient supply of wooden tongue blades, a fresh one being used for each child examined, or,
- B.--If instruments are to be used, provide yourself with not fewer than six mouth mirrors and six explorers, using them in rotation, and a portable apparatus for sterilizing by boiling. An enameled basin over a Sterno burner makes an inexpensive outfit. When possible a pupil should be delegated to assist in sterilizing.
- C.--Provide yourself with a number of small clean towels, or preferably a roll of paper toweling.
- II A.--Be scrupulous in the care of your hands, both for the sake of your personal reputation and for the educational impression you may make upon the children examined. It is seldom necessary to touch a child with the hands.
- B.--Make every effort to overcome fright and timidity. It is unnecessary and inexcusable to hurt a child, or give any cause for fright or terror.
- III The State Board of Health requested the Executive Council of the State Dental Society to fix a maximum fee in order to guard the public against the possibility of exorbitant charges in some instances. The fee fixed by the Executive Council of the State Dental Society is \$10.00 per day with necessary traveling expenses.
- IV Follow the school inspection with a snappy talk on care of mouth and teeth. Tell the children about the importance of the six year molars, and hold a tooth brush drill.
- V It is suggested that dentists secure inspection blanks from the county superintendent and use these for making dental inspections for exemption certificates.

RECOMMENDATIONS TO SCHOOL SUPERINTENDENTS.

Made and approved by the State Board of Health, Executive Council of the State Dental Society, and the State Department of Education.

- I. The law requiring free dental inspection in all public schools of Kansas makes possible four very important results:
 - A. Immediate benefit to the health of the children treated.
 - B. Effective education of the children in practical dental hygiene.
 - C. The securing of statistics which will reveal present conditions.
 - D. The compilation of data for a basis of future methods and procedure.
- II. In order to operate the law on an efficient basis and secure the above results, uniformity of procedure is essential. Uniformity can only be secured by the use of uniform records and uniform methods of tabulation. Therefore the Executive Council of the State Dental Society, the State Board of Health, and the State Department of Education have complied and recommend the inclosed forms.
- III. It is suggested that the county superintendent at the first opportunity call a meeting of the various district school boards and arrange a circuit of dental inspection which shall economize time and expense.
- IV. The adage, "The best is none too good" applies to nothing more forcibly than to dental inspection of school children. Appoint only high class professional men to do this important work. Other things being equal the dental inspector should be selected with some reference to his ability to present the subject of dental hygiene to the children in an intelligent and attractive manner.
- V. Local and county Boards of Health may appropriately be invited to assist in popularizing the idea of corrective dental work for school children.

INSTRUCTIONS TO SCHOOL TEACHERS

Made and approved by the State Board of Health, and the Executive Council of the State Dental Society.

I. EXPLANATION

The law of 1919 requiring free dental inspection in all the public schools of Kansas makes possible four very important results:

- A. Immediate Benefit to the Health of the children treated.
- B. Effective education of the children in practical dental hygiene.
- C. The securing of statistics which will reveal present conditions.
- D. The compilation of data for a basis of future methods and procedure.

In order to operate the law on an efficient basis and secure the above results, uniformity of procedure is essential. Uniformity can only be secured by the use of uniform records and uniform methods of tabulation. Therefore the Executive Council of the State Dental Society and the State Board of Health have jointly compiled the model forms, which your district is advised to use.

II. The Teacher's Opportunity:

The approved dental inspection blanks were made to include some very important physical points associated with mouth conditions which may be observed and checked by the teacher. This gives the teacher the opportunity to contributing to an important piece of research on the health of Kansas school children. This will give compulsory free dental inspection in the Kansas public schools not only a practical, but a scientific value. This can be accomplished only by the painstaking co-operation and interest of the teacher.

III. The Teacher's Duties:

- A. The preliminary inspection is extremely important and the filling out of the physical inspection blank must be completed before the dentist's visit. This should be done as soon as possible after the opening of school. The time set apart for hygiene teaching may appropriately be given to making physical inspections, making two and three at each period until all are completed. Where there has been no time reserved for this, or where the time is insufficient, the teacher may call one pupil at a time to her desk during recess or noon hour, and perhaps do one each evening after school until a blank has been filled for each one.

- B.--The inspection blanks are marked by making a cross after the appropriate word, leaving unmarked those which do not apply. It is very important that every point applying to the child be marked, otherwise the records are incomplete and have no statistical value.
- C. The Items from the inspection blanks, both dental and physical, should be transferred to the tabulation sheet delivered to the Clerk of the School Board within ten days after the completion of the inspections. The card will be filed and the tabulation sheet will be sent to the State Board of Health to be used for statistical purposes.
- D. The parent's card must be given to the child at the time of the dental inspection, with strict injunction to deliver to parents.
- E. When these cards are returned, signed by the family dentist, they must be preserved and delivered to the Clerk of the School Board, who will in turn send them to the State Board of Health for the purpose of completing the statistical records.
- F. Pupils bringing exemption cards signed by the family dentist will also receive the physical inspection and have the exemption noted in the appropriate column on the tabulation sheet.

IV Preparation for the Dental Inspection:

- A. Made the coming of the school dentist the occasion for teaching the importance of the services of the dentist. One way of doing this is by having attractive blackboard charts, or better still, having the children make and decorate cardboard wall charts setting forth dental health maxims.
- B. The school dentists are required by the State Board of Health to use a separate wooden tongue blade for each child examined or boil every instrument before using. The reason for this should be explained to the children in advance.
- C. Suitable blackboard inscriptions are here suggested. Others may be found in various health leaflets or suggested by the pupils themselves.

CLEAN DENTAL WORK

The mouth may contain many kinds of disease germs. For this reason nothing which touches one person's mouth should touch another person's mouth until all germs have been killed. The dentist will boil all dental instruments before he puts them in your mouth.

DENTAL HYGIENE

Good teeth mean Good Health.

Good teeth must have proper food to make bone, such as milk, whole cereals and leafy vegetables.

Good teeth mean clean teeth. A clean tooth seldom decays.

Good teeth must be used to chew thoroughly the food taken into the mouth. This strengthens the teeth and spaces them properly in the jaw.

You cannot be healthy without good teeth.

You cannot look well without good teeth.

You cannot grow to your full size without good teeth.

You cannot do your best work without good teeth.

You cannot make the greatest success in life without good teeth.

Now is the time to get and keep good teeth.

Decayed teeth may make you ill by causing indigestion, stomach trouble, diseases of the blood, heart, kidneys, joints, muscles and glands. Don't take a chance on getting these by neglecting your teeth now.

Neglected teeth get sore and hurt. Take care of your teeth and avoid this.

- V Follow up the dentist's visit by a series of talks, tooth brush drills and so forth. You can do no more important piece of teaching this year than driving home the lesson of personal dental hygiene.

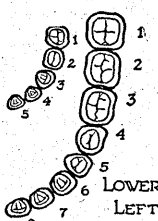
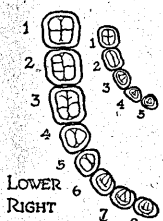
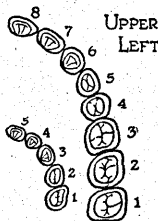
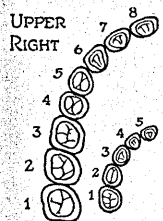
FRONT OF CARD USED FOR DENTAL INSPECTION IN KANSAS.

PUBLIC SCHOOL FREE DENTAL INSPECTION

Sex..... Race..... Date.....

County..... Town..... School.....

Name..... Address..... Age..... Grade.....



HOW TO MARK

Decay—draw circle around tooth:

Cavity—draw line from tooth:

Pyorrhea—draw part affected thus:

Copyright applied for.



UPPER RIGHT UPPER LEFT The Examiner must boil all instruments after each using, or use a wooden tongue depressor for each child, and destroy it at once.

EXAMINATION

Draw a circle around the appropriate descriptive word:

Condition of mouth: good, fair, bad.

Condition of gums: good, fair, bad.

No. of Abscesses.....in permanent teeth.....temporary.....

No. of cavities.....in permanent teeth.....temporary.....

Teeth stained..... tartar.....

Malocclusion: marked, moderate, none.

Mouth-breather: marked, moderate, no.

Use of tooth brush: regularly, occasionally, never.

Other defects.....

Remarks.....

Signed.....

DENTAL INSPECTOR

McCormick-Mathers Co. Wichita 1200-A-1

BACK OF CARD USED FOR DENTAL INSPECTION IN KANSAS.

PHYSICAL INSPECTION

To be made by Teacher or School Nurse prior to the Dental Inspection.

This report is designed to cover only physical points which are often associated with bad teeth and is made for the purpose of collecting data which will enable the school and the state to handle the important subjects of physical and dental hygiene more intelligently.

I. Age.....Sex.....Height.....Weight.....normal weight (See standard table).....
Pounds over weight for height and age..... Pounds under weight for height and age.....

II. Mental Condition: Bright.....Industrious.....Dull.....Inattentive.....Nervous.....
High strung.....Difficult to govern.....Failed in grades.....Absent often.....

III. General Physical condition: Well developed.....energetic.....poorly developed.....
listless and inactive.....

IV. Special physical points: (a) Skin: healthy.....clear.....sallow.....pale.....
flabby.....pimples.....(b) Eyes: Defective vision.....other defects.....
(c) Ears: Defective hearing.....(d) Mouth, Nose, Throat: Teeth irregular.....prominent.....
mouth breathing.....nasal voice.....nasal discharge.....coated tongue.....
(e) Neck: enlarged glands.....

V. Symptoms: (a) Pain or stiffness in joints or muscles.....
(b) Headache: never.....seldom.....often.....time of day worse a.m..... worse p.m..... (c) Tooth-
ache: never.....seldom.....often.....(d) Indigestion: never.....seldom.....
often.....(e) Get out of breath easily.....(f) Get tired easily.....

Make X after each appropriate word.
ANSWER EVERY POINT to the best of your
judgment, otherwise the tabulations will
be incomplete and of little value.

Signed.....
(Check which) Teacher Nurse.

The Hays Plan

We have had dental inspection for seven years. In connection with this service we conduct a vigorous dental campaign. The dentists of the town have co-operated splendidly, giving their services free. For the first three years we conducted the examination in the school buildings. The numbers of pupils waiting for this examination became so small that we abandoned this and have the examination in the dentists office much to the satisfaction of the dentists. Beginning in July, we arrange with the dentists to set aside a certain period certain days in the week for dental inspection, and urge pupils to make appointments, selecting their own dentists. We defer the regular inspection until October, to give all an opportunity to visit the dentist. At the expiration of this period we take the remaining pupils into three divisions and take them to the offices of the dentists. This year only thirty out of 420 remained to be taken. Our aim is to get the parents and pupils in the habit of visiting the dentists. It is working fine. Both dentists and health officer report a marked improvement in the condition of the children's mouths.

In addition to the dental inspection by the dentists, the county health officer and nurse include a dental inspection in their general health inspection, which is conducted twice per year,

Very respectfully,

Supt. Shively.

FROM A PERSONAL LETTER FROM DR. CRUMBINE.

Replying to your letter of the 9th, will say, I believe that Dr. McFarland, a dentist in Kansa City, is chiefly responsible for the passage of our free dental inspection law.

Yours very truly,

S. J. Crumbine,

Sec. State Board of Health.

FROM A PERSONAL LETTER FROM DR. WEAVER.

Replying to yours of the 15th, Dr. Harry McFarland of Kansas City, Kansas, is given credit for the Kansas Free Dental Inspection Law. I believe that Kansas is the only State in the United States today that has the State Wide Free Dental Inspection Law. The weak point being that it was not placed under the State Board of Health, in which case its enforcement would have been made without question, as it is, it is a haphazard proposition.

Very truly yours,

C. K. Weaver,

Sec. Kansas Dental Society.

SUMMARY, DENTAL INSPECTION, MINNEAPOLIS CITY SCHOOL, 1919-1920

ALL GRADES AND HIGH SCHOOL.

Numbers at top of table indicate grades from 1-12, those at

left indicate number of teeth needing attention.

number of teeth needing att.	1	2	3	4	5	6	7	8	9	10	11	12	All
None.	9	3	1	21	18	6	6	8	19	7	19	19	136
One.	1	3	0	7	8	0	6	3	5	7	7	5	52
Two.	7	5	4	8	3	4	1	6	15	10	5	2	70
Three.	3	6	5	2	2	9	3	3	6	2	2	2	45
Four.	2	2	5	1	0	7	5	5	4	2	7	1	44
Five.	4	4	8	0	1	4	2	1	3	3	0	1	31
Six.	9	6	5	2	0	1	2	2	4	3	0	1	35
Seven.	3	4	2	0	1	3	2	1	2	1	0	0	19
Eight.	2	1	9	0	0	0	0	3	1	0	1	0	17
Nine.	3	0	0	0	0	0	2	0	1	0	0	0	6
More than 9.	6	6	2	0	0	0	3	1	1	1	0	1	21
Teeth need cleaning	27	28	5	11	2	17	23	30	29	13	11	6	202
Teeth do not need cleaning.	22	11	37	31	31	19	7	4	30	23	29	26	270
Condition of gums satisfactory.	46	29	42	42	33	33	23	21	57	36	40	32	434
Condition of gums not satisfactory.	3	10	1	0	0	3	7	13	3	0	1	0	41
Uses tooth brush.	16	23	13	28	28	20	13	17	52	35	39	32	316
Uses it occasionally.	0	0	16	0	0	9	0	0	2	1	2	0	30
Does not use tooth brush.	33	16	13	14	6	7	17	17	6	0	0	0	129
Have been to a dentist.	9	21	18	19	20	18	22	22	37	25	33	25	269
Have not been to a dentist.	39	18	24	23	13	18	8	12	23	11	8	7	204

EXTRACT FROM MONTGOMERY COUNTY FREE DENTAL INSPECTION.

Number of children inspected-----	1308
Irregular teeth-----	246
Prominent teeth-----	74
Mouth breathing-----	165
Toothache, seldom-----	372
Toothache, often-----	107
Condition of gums bad-----	34
Condition of mouth bad-----	69
Number of absesses-----	406

Number of cavities in teeth

Permanent teeth-----	1455
Temporary teeth-----	1578
Stain on teeth-----	830
Tartar on teeth-----	165

Malocclusion

Marked-----	67
Moderate-----	186

Use of toothbrush

Regularly-----	402
Occasionally-----	613
Never-----	207
Other defects of teeth-----	18